



REPUBLIC OF NAMIBIA

MINISTRY OF AGRICULTURE, WATER AND FORESTRY

VOTE 20
TECHNICAL PAPER

BY

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TECHNICAL PAPER IN SUPPORT OF THE MOTIVATION STATEMENT OF MAWF BUDGET

The purpose of the Technical Paper is to provide detailed information in addition to the Ministry of Agriculture, Water and Forestry's Budget Motivation Speech.

The MAWF's (Vote 20) total budget is **N\$ 2 137 075 000** of which **N\$ 1 139 630 000** (53.3%) is earmarked for the Development Budget and **N\$ 997 445 000** (46.7%) represents the operational budget.

1. MAIN DIVISION 01 : OFFICE OF THE MINISTER

RECURRENT BUDGET : N\$ 4 005 564

A total of **N\$ 7 393 000** is required for the Main Division 01, the Office of the Minister, for running activities of the office.

2. MAIN DIVISION 02 : ADMINISTRATION

RECURRENT BUDGET : N\$ 152 609 367

CAPITAL/DEVELOPMENT BUDGET : N\$ 22 468 000

2.1 OBJECTIVE

The main objective of the Directorate of General Services is to provide corporate support services to the other Directorates of the Ministry.

The specific objectives are to:

- Ensure effective Ministerial Financial Management.
- Ensure efficient Internal Audit Services.
- Ensure efficient provision of Auxiliary Services.
- Administer Human Resources efficiently and effectively.
- Ensure efficient Ministerial Information Communication Technology Services.
- Efficiently mainstream of Gender, Employee Wellness and HIV & AIDS.
- Ensure efficient ministerial Plant and Fleet Management

2.2 RECURRENT ACTIVITIES

2.2.1 MAJOR ACHIEVEMENTS FOR 2017/2018

2.2.1.1 FINANCE

- Ninety eight percent (98%) of the Ministerial Budget was executed for the implementation of the planned activities
- Duly submitted MoF forms for 2018/19-2020/21 MTEF to the Ministry of Finance
- Ministerial Financial Administration and Management Compliance were all in accordance to requirements of the Office of the Auditor General (OAG)
- Submitted the 2016/17 Ministerial Annual Statements to the Auditor General

- Processed EFT (Electronic Funds Transfer) of Daily Subsistence and Travelling Allowance (DSA), Accounts Payable and Payroll payments, for payments by MoF.
- Compiled and submitted the 2017/18 Ministerial Mid-year Budget Review to Treasury;
- Duly submitted the 2016/17 Ministerial Accountability Report, Appropriation Account, 2018/19 to 2020/21 MTP, and Non Tax Revenue (NTR) forms to Treasury;

2.2.1.2 INTERNAL AUDIT

- Conducted Revenue trainings at Rundu, Oshakati, Otjiwarongo and Gobabis on which a total number of 164 participants were trained.
- Conducted eleven (11) financial inspections in three (3) regions: Omaheke, Erongo and Otjozondjupa.
- Conducted follow-up audits on audit queries received at four (4) Green scheme Projects namely: Sikondo, Shadikongoro, Vhungu-vhungu and Etunda.
- Conducted Revenue Inspections at five (5) Research Stations; Manheim, Sonop, John Pandeni, Omatjenne and Okomumbonde.
- Finalized the draft Enterprise Risk Management Framework for directorates.
- Completed eleven (11) investigations during 2017/18.
- Attended five (5) disciplinary hearings.
- Attended court proceedings as witness on one occasion. The case was concluded.

2.2.1.3 HUMAN RESOURCE (HR)

- Administered the conditions of service which include; remuneration system, leaves, retirement and GIPF claims of deceased staff members.
- Filled 20% of the budgeted vacancies.
- Placed 30% of staff member who are additional to the establishment on the new approved ministerial structure.
- Submitted the 3-year Ministerial Affirmative Action Plan, in compliance with the Affirmative Action Act to the Employment Equity Commission (EEC) report.
- Implemented over 80% of the Human Capital Management System.

2.2.1.4 AUXILIARY SERVICES

- Rendered utility services to Ministerial outlets in all the 14 regions.
- Provided security services at MAWF outlets country-wide.
- Facilitated tenders approval through Tender Board to procure goods and services for the Ministry.
- Published Quarterly Ministerial News Letters and the Annual Report.
- Responded to media on Ministerial related issues and provided press releases.
- Livestock stock-taking was conducted at all 13 research stations that keep livestock as well as stock taking at all ministerial outlets in the 14 regions.

2.2.1.5 INFORMATION COMMUNICATION TECHNOLOGY (ICT)

- The following offices were connected onto the MAWF network: DVS - Kamanjab and DAPEES - Erwee
- Decentralised MAWF IT Support Services: in total, 13 IT Technicians were appointed.
- The procured and renewed the anti-virus license
- The procured and renewed the Firewall license

2.2.1.6 EMPLOYEE WELLNESS & HIV/AIDS PROGRAMME

- Provided Information, Education & Communication (IEC) materials, and condoms to regional offices on a quarterly basis.
- Conducted quarterly awareness creation sessions on HIV/AIDS and wellness issues (Cancer, Blood pressure, Cholesterol and Diabetics and facilitated health diagnostic at work.

2.2.1.7 PLANT AND FLEET MANAGEMENT

- Provide transport support services to the Ministry.
- Provided fuel and licensing and to a fleet of 1600 vehicles and trucks.
- Provided vehicle repairs and maintenance, driver management, speed management, fuel management and health and safety management.

2.2.2 CHALLENGES EXPERIENCED IN 2017/2018

2.2.2.1 FINANCE

- Budgetary constraints resulted in late and or non-payments to service providers for services rendered.
- Delay in acquisition of supplier codes for EFT payments to suppliers of goods and services delivered.

2.2.2.2 INTERNAL AUDIT

- Most of the appointed sub-receivers do not have appointment letters.
- Delays in completion of legal cases.
- Limited finance and administration skills for Farm Managers at Green Schemes & Research Stations
- Due to the shortage of staff, implementation of Enterprise Risk Register Management Framework (ERMF) could not take place.
- Some of the Green Scheme projects were operating two (2) parallel accounting systems.

2.2.2.3 HUMAN RESOURCE (HR)

- Challenge regarding implementation of Performance Agreements at all levels.
- Budget cuts resulted into the suspension of filing of vacancies.

2.2.2.4 AUXILIARY SERVICES

- The tariff adjustment of the Local Authorities does not coincide with the budget period and the increases are higher than the budgeted increase.
- Unexpected statutory tariff adjustment of the security services.

2.2.2.5 INFORMATION COMMUNICATION TECHNOLOGY (ICT)

- Delays from Service providers to install the trucking (networking infrastructure) timeously.

- A budgetary constraint has hindered the procurement of various accessories and equipment.

2.2.2.6 PLANT AND FLEET MANAGEMENT

- Inability to implement fleet management system due to funding.
- Prolonged vehicles down-time due to payment delays for repair services.
- Aging and obsolete Ministerial Fleet
- Spanglish service provision by SME resulting in delay payment and poor service delivery to the community as the vehicle spent much time in garages.

2.2.3 PLANNED ACTIVITIES FOR 2017/2018

2.2.3.1 FINANCE

- 100% of Ministerial Budget to be executed for the implementation of planned activities
- Submit MoF forms for 2019/2020-2021/22 Medium Term Framework (MTEF) to be to the Ministry of Finance
- Submit 2017/18 Ministerial Annual Statements for the Auditor General Report to the Office of the Auditor General.
- Process EFT (Electronic Funds Transfer) of Daily Subsistence and Travelling Allowance (DSA), Accounts Payable and Payroll payments for payments by MoF.
- Compile and submit the Ministerial 2018/19 Mid-year Budget Review, 2017/18 Appropriation Account, 2017/18 Ministerial Accountability Report, and 2019/20 - 2021/22 MTP and Non Tax Revenue (NTR) Templates to Treasury.
- Conduct training for staff members on reconciliation of suspense accounts.

2.2.3.2 INTERNAL AUDIT

- Implement the Enterprise Risk Management Framework for the Directorates.
- Follow-up on Risk based auditing program as per developed Risk Registers.
- Improve/conduct more surprise audits.
- Follow-up on recommendations from the Auditors General Office.

2.2.3.3 HUMAN RESOURCES (HR)

- Train supervisors in MAWF on HR matters.
- Fill vacant budgeted posts in MAWF.
- Place Staff member who are additional to the establishment on the approved Ministerial structure.
- Submits the Affirmative Action report.
- Continue to administrate staff conditions of service, disciplinary and grievances.
- Facilitate implementation of the new approved Ministerial structure.

2.2.3.4 AUXILIARY SERVICES

- Continue with provision of office support services
- Implement the stock taking program
- Maintain Ministerial Asset Management
- Maintain administration of Ministerial procurement
- Develop a Comprehensive Fleet Management System
- Train staff on new system to improve service to clients (MAWF)
- Conduct auctions for redundant and obsolete assets
- Update the Ministerial asset registers
- Print Ministerial newsletters and Annual Reports
- Facilitate Ministerial press releases and respond to media queries

2.2.3.5 INFORMATION COMMUNICATION TECHNOLOGY (ICT)

- Install structural cables and trunks at Oshifo and Okalongo office,
- Connect the following offices to the MAWF network: Katima Regional Office, Omafo (DAPEES and DWSSC), Onayena ADC, Okashana, Head Office East Wing, & 7 border posts, and Okahao
- Develop 10% of MAWF Management Information System
- Implement 35% of Ministerial EDRMS System
- Convert MAWF Officers to VOIP (CVL, Plant & Fleet, Stores, State Vet (Outapi Regional Head).

2.2.3.6 EMPLOYEE WELLNESS & HIV/AIDS PROGRAMME

- Co-ordinate Employee Wellness and HIV/AIDS Mainstreaming and prevention activities.
- Provide care/support for affected/infected staff members.
- Distribute condoms, Information and education material to staff members.

2.2.3.7 PLANT AND FLEET MANAGEMENT

- Implementation of a comprehensive electronic fleet management system
- Auction off obsolete MAWF Fleet
- Finalize the MAWF Fleet Management Plan.
- Provide transport and fleet management services to the ministry.
- Provide fuel, licensing, repairs and maintenance to MAWF fleet of 1600 vehicles, trucks and tractors.
- Provide vehicle [telematics](#) (tracking and diagnostics), driver management, speed management, fuel management and health and safety management

2.3 CAPITAL PROJECTS

2.3.1 RENOVATION OF MAWF BUILDINGS

2.3.1.1 ACHIEVEMENTS FOR 2017/2018

- Renovated Ministerial staff houses at: Oshana Region (1), Ongwediva (1) and Khomas Region, Windhoek (1).
- Renovated offices and main stores at Okahandja in the Otjozundjupa South Region.

2.3.1.2 PLANNED ACTIVITIES FOR 2017/2018

- Replacement of existing lifts at MAWF Head Office
- Renovate and upgrade Ministerial properties countrywide

2.3.2 CONSTRUCTION OF REGIONAL HEAD QUARTERS

2.3.2.1 ACHIEVEMENTS FOR 2017/2018

- Construction of Regional Head Quarters in Ohangwena Region, Eenhana is 75% completed and the East Wing in Khomas, Windhoek (GOP) is 50% completed.

2.3.2.2 PLANNED ACTIVITIES FOR 2018/19

- Complete construction of Ohangwena and Khomas (East Wing) Regional Head Quarters.

3. MAIN DIVISION 03 : VETERINARY SERVICES

RECURRENT BUDGET : N\$ 184 332 135

CAPITAL BUDGET : N\$ 116 517 000

3.1 OBJECTIVES

The objective of the Directorate of Veterinary Services (DVS) is to maintain and promote optimal animal health, production and reproduction and assure the safe and orderly marketing of animals and animal products through animal disease control, epidemiology and extension, diagnostic services and veterinary public health services.

3.2 MAIN FUNCTIONS:

- Implement both development and regulatory activities in accordance with legislation and directives related to the animal industry;
- Develop structures and physical infrastructures necessary to bring veterinary services to all parts of the country, maintain integrity that the Namibian Veterinary Services enjoys, ensuring continued exports of animals and animal products, as well as regional and international cooperation;
- Ensure that good cooperation with the farming community is maintained so as to benefit the health of the nation's livestock;
- Maintain and improve the diagnostic and supportive role of the Central Veterinary Laboratory.

3.3. RECURRENT ACTIVITIES

3.3.1 MAJOR ACHIEVEMENTS IN 2017/2018

3.3.1.1 Disease Surveillance and Control

Animal disease surveillance is a major activity of DVS. Routine active and passive surveillance activities such as farm inspections, community visits, ante- and post-mortem inspections at abattoirs, supervision of livestock auctions, export certification and inspection of imported animals and animal products were carried out during the year with relatively favorable results as no major events were observed.

Disease surveillance is done in order to provide evidence of the country's animal health status which is constantly under threat by animal diseases that have the potential to disrupt Namibia's access to local, regional and international markets. Animal disease surveillance program ensures that diseases or conditions that may precipitate disease outbreaks are mitigated and that systems are in place for early detection and early effective response.

Animals slaughtered under veterinary supervision:

- Ninety-three thousand eight hundred and twenty-one (93 821) cattle
- Two hundred and fifty thousand four hundred and seven (250 407) sheep
- Three hundred and one (301) springboks

Number of farms and animals inspected:

- Livestock at 2 323 farms were inspected routinely
- Three hundred and sixty-one thousand four hundred and twenty-nine (361 429) cattle inspected at auctions
- One hundred and sixty-eight thousand four hundred and seventeen (168 417) sheep inspected at auctions
- One hundred and twenty-four thousand one hundred and seventy (124 170) goats were inspected at auctions
- Two hundred and twenty-seven thousand two hundred and thirty-nine (227 239) cattle were inspected before export
- Three hundred and thirty-six thousand and seven hundred and sixteen (336 716) sheep were inspected before export
- One hundred and twenty-nine thousand one hundred and fifty-seven (129 157) goats were inspected before export

- During 2017, 3 972 community visits were done and 2 323 farms inspected. Mass vaccinations of animals against diseases such as Foot and Mouth Disease, Lungsickness and Rabies were carried out during the year. A total of 525 475 cattle were vaccinated against FMD in the infected zone and protection zone with coverage of 80.95%. Meanwhile 904 408 cattle were vaccinated in the NCA against Lungsickness with coverage of 74.49%.

- The Namibian Livestock Identification and Traceability System (NamLITS), which is the backbone of animal disease surveillance, has now been extended to cover the whole country. This system enables government to keep accurate records of animal disease surveillance, animal movements and vaccinations. It also allows for monitoring of breeding programs as well as population dynamics and development of future projections. In the 2017/18 financial year, 199 681 additional cattle were tagged in the NCA.
- Livestock identification and traceability, import/export control, extension and regulatory inspections at community level, farms, livestock auctions and abattoirs were carried out.
- Maintenance of veterinary infrastructures such as veterinary clinics, crush pens, quarantine farms, veterinary cordon fences some of which required extensive repair due to old age. Electrification of parts of the border and Veterinary Cordon Fence improved the zoo-sanitary controls of the country.
- The Ministry has developed a Strategy and Implementation plan for the implementation of the Cabinet Committee on Policy and Planning (CCOPP) Action Letter dated 1st April 2014, Resolution 3 which directed MAWF to:
 - (a) Construct a Veterinary Cordon Fence (VCF) on the Namibian Angolan border;
 - (b) Establish a trans-boundary animal disease free zone, including Namibia and part of Angola among others

3.3.1.2 Export markets

- Namibia continues to access foreign markets for its animals and animal products. The traditional markets are mainly in Norway, the EU, Angola and South Africa.
- During 2017, Namibia managed to gain acceptance into China, Hong Kong, United States and Russia.
- Namibia has since exported three consignments of beef to Hong Kong and passed tests in that country.
- In September 2017, Namibia was audited by the Food Safety Inspection Service (FSIS) of the United States Department of Agriculture (USDA). With regard to the US market the labels for Namibian beef have been approved by USDA and as such exports to the USA can now commence.

3.3.1.3 Animal Health Status

Namibia maintained its Official Disease Status as granted by the World Organisation for Animal Health (OIE) which include the following:

- Freedom from Foot and Mouth Disease south of the Veterinary Cordon Fence (VCF)
- Freedom from Peste Des Petits Ruminants (PPR) south of the Veterinary Cordon Fence (VCF)
- Freedom from Lungsickness (CBPP) to the area south of the Veterinary Cordon Fence (VCF)
- Negligible Risk Status for Mad Cow Disease (BSE) for the whole country
- Namibia continued implementing the Foot and Mouth Disease and Lungsickness Endorsed Control Programmes which are a road map for achieving FMD freedom in the protection zone and CBPP freedom in the entire Northern Communal Areas (NCA).
- Foot and Mouth Disease (FMD) was detected on Musele Island in the Zambezi Region on 12th July 2017. The source of the outbreak was believed to be Wild African buffalo (*Syncerus caffer*) resident at Kasika Conservancy and grazing together with cattle. The outbreak was rapidly contained through livestock movement control, vaccination of cattle and public awareness.
- Despite the outbreak, the FMD free zone, which is south of the Veterinary Cordon Fence (VCF) remained unaffected and exports to lucrative markets were also not disrupted.
- Following the launch of the rabies pilot control project March 2016 in the Oshana Region, the project was rolled out to all the eight regions of the NCA. The following activities were implemented: pet vaccination, surveillance and community education. A total of 104 386 pets were vaccinated against rabies in the NCA in 2017. The project has seen a major improvement in pet rabies vaccination coverage and a decline in rabies cases.

3.3.2 PLANNED ACTIVITIES FOR (2018/2019)

3.3.2.1 Improvement of Animal Health and Marketing Services in Northern Communal Areas

- DVS will continue to implement the policy aimed at creating conditions which will allow farmers in the Northern Communal Area (NCA) to access local, regional and international markets for their animals and animal products.
- DVS will continue to implement the OIE endorsed Official Control Programme for Foot and Mouth Disease and Lungsickness for the Northern Communal Areas for eventual eradication of FMD from Protection Zone and Lungsickness from the entire NCA.
- DVS will increase the number of veterinary offices in the Northern Communal Areas to reduce the distance that farmers have to travel to seek veterinary services
- DVS will increase the number of border infrastructure in the NCA to improve import and export control of animals and animal products
- DVS will develop and implement protocols to facilitate the local marketing of meat by small abattoirs in the Northern Communal Areas;
- DVS will hold border harmonization meetings with neighboring countries particularly Angola.
- DVS will continue to implement the Angola-Namibia MOU on cooperation in the control, prevention and eradication of Foot and Mouth Disease (FMD) and Lungsickness.
- DVS will continue to engage in trade negotiations on sanitary measures for acquiring new markets for animals and animal products.

3.3.2.2 Construction of new veterinary infrastructure

- Complete the construction and rehabilitation of three government owned abattoirs Outapi, Eenhana and Rundu in the NCA to promote livestock marketing, enhance surveillance and food safety standards in the area;
- Construction of Ondangwa Veterinary Clinic and Laboratory to improve diagnostic services in the NCA.

3.4 CAPITAL PROJECTS

3.4.1 DEVELOPMENT OF ANIMAL AND PLANT INSPECTION CENTRES AT BORDER ENTRY POINTS

3.4.1.1 MAJOR ACHIEVEMENTS FOR 2017/2018 (N\$ 16 396 000)

The infrastructure development for sanitary and phyto-sanitary import/export control to prevent the introduction of exotic plant and animal diseases in Namibia has progressed well.

- Construction of sanitary and phyto-sanitary import/export control point at Kasamane, Mahenene and Wenela was completed and handed over.
- Construction of sanitary and phyto-sanitary import/export control points at Oronditi, Swartbooisdrift, Katwitwi and Dobe is at various stages of completion.

3.4.1.2 PLANNED ACTIVITIES FOR 2018/2019

- Complete construction of sanitary and phyto-sanitary import/export control infrastructure at Oronditi, Swartbooisdrift, Katwitwi and Dobe border posts.

3.4.2 CONSTRUCTION OF VETERINARY CLINICS, OFFICES AND ACCOMMODATION

3.4.2.1 MAJOR ACHIEVEMENTS FOR 2017/2018 (N\$ 5 073 000)

In order to improve access to veterinary services, the Ministry has continued the construction of offices, accommodation facilities and other infrastructure in various parts of the country.

- Construction of veterinary clinics, offices and accommodation was completed at the following centres: Okahao in Omusati and Omundaungilo in Ohangwena region
- Construction of accommodation and canopies was completed at the following Veterinary Control Gates: Tsintsabis, Oshivelo, Rooidag and Werda.

3.4.2.2 PLANNED ACTIVITIES FOR 2018/2019

- Continue construction of Traceability Office in Windhoek), Chief Veterinarian Office for Central Regions in Windhoek, veterinary clinic at Ondangwa, offices and

accommodation at Tses in //Kharas, Ndiyona in Kavango East, Ncaute in Kavango West and Sangwali in Zambezi.

- Construct a state veterinarian house at Kamanjab State Veterinary Office.
- Renovate State Veterinary Office at Walvis Bay.

3.4.3 EXTENSION OF THE CENTRAL VETERINARY LABORATORY

3.4.3.1 MAJOR ACHIEVEMENT FOR 2017/2018

- Continued the construction of Ondangwa Regional Veterinary Laboratory

3.4.3.2 PLANNED ACTIVITIES FOR 2018/2019

- Equipping of the Central Veterinary Laboratory in Windhoek.

3.4.4 IMPROVEMENT OF ANIMAL HEALTH AND MARKETING SERVICES IN NORTHERN COMMUNAL AREAS

3.4.4.1 MAJOR ACHIEVEMENTS 2017/2018 (N\$14 772 000)

- There were no outbreaks of Lungsickness.
- Continued implementation of the OIE Endorsed Control Programme for eventual eradication of Foot and Mouth Disease and Lungsickness in the NCA.

3.4.4.2 PLANNED ACTIVITIES 2018/2019

- Intensification of clinical and serological surveillance in the Northern Communal Areas.
- Conduct prophylactic vaccinations against Foot and Mouth Disease and Lungsickness.
- Livestock identification and traceability activities will continue throughout the country in order to support animal disease surveillance and marketing of livestock and their products.
- Recruit personnel as per the new approved structure.
- Continue implementation of the OIE Endorsed Control Programme for eventual eradication of Foot and Mouth Disease and Lungsickness.

3.4.5 BEEF VALUE CHAIN DEVELOPMENT IN THE NORTHERN COMMUNAL AREAS (NCA)

3.4.5.1 MAJOR ACHIEVEMENTS 2017/2018 (N\$31 483 000)

The objective of the project is to ensure improved marketing of livestock in the NCA and production of value added meat and meat products in order to compete at local, regional and international markets. Cattle and goats in the NCA have limited marketing channels and almost no access to lucrative markets. Appropriate, well-situated slaughter facilities, in the form of abattoirs that conform to best practice standards are therefore needed. In this regard:

- Upgrading of Eenhana and Outapi abattoirs
- Construction of Rundu abattoir and cold storage has continued
- The Zambezi Regional Council availed land to MAWF near Bukalo to erect an abattoir, cold storage and a meat processing/cooking facility for value added products. Project funds and administration were transferred to the Meat Board of Namibia. The land has been surveyed, Deeds of Sale signed by MAWF.
- Construction of Cold storage facility and meat processing at Ongwediva Fresh Produce Hub has continued.

3.4.5.2 PLANNED ACTIVITIES 2018/2019

- Undertake feasibility study for the development of a meat processing facility at Bukalo in Zambezi Region
- Continue with construction of Meat processing facility at Ongwediva Fresh Produce Hub
- Construction of a storm water drainage channel at Outapi Abattoir
- Undertake trial slaughters at Eenhana Abattoir
- Complete and equip Rundu Abattoir
- Complete and equip Ongwediva Meat Processing Facility
- Renovate Oshakati and Katima Mulilo Abattoirs
- Construction of Bukalo Meat Processing Facility

4. MAIN DIVISION 04 : AGRICULTURAL RESEARCH

RECURRENT BUDGET : N\$64 437 633

CAPITAL BUDGET : N\$31 099 000

4.1 OBJECTIVES

- To conduct agricultural research through need-driven, basic, adaptive and strategic research in the communal and commercial farming areas of Namibia.
- To develop and conserve crop and livestock genetic material for current and future use.

4.2 MAIN FUNCTIONS

- Conduct crop and livestock production, and rangeland research
- Conserve and improve plant and animal genetic material
- Provide livestock performance support services

4.3 RECURRENT ACTIVITIES

4.3.1 ACHIEVEMENTS FOR 2017/18

4.3.1.1 Crop Research and Production

- In total, twenty (20) cowpea varieties were listed of which seven (7) were released while twelve (12) sorghum varieties were listed with a released of four (4).
- Sixteen (16) pearl millet varieties were listed, but no release took place due to contamination. The varieties will be subjected to a purification process.
- Seed production for cowpea, pearl millet, sorghum and maize continued whereby 37.6 tons of foundation seed and 128.2 tons of certified seed for cowpea, pearl millet and sorghum were produced.

4.3.1.2 Rangeland Management and Pasture Research

- Cultivated pastures (1 hectare) at Okapya LDC has been successfully established. Plant density is satisfactory and re-sowing is needed;
- Grazing Index Volume (GIV) was successfully completed for the Dwarf scrub savanna in the Rehoboth area;
- Successfully completed the Bush Density Map for Southern Namibia.

4.3.1.3 Large Stock Research

- Completed DNA analysis phase 1 of the collected hair samples from the indigenous cattle of Kavango East and Kavango West Regions; and
- Maintained the conservation and development of Sanga, Afrikaner, Bonsmara and Simmentaler cattle.
- Completed the project under Simmentaler cattle on “The effect of breeding season on the performance of Simmentaler cattle”.

4.3.1.4 Small Stock Research

- The breeding towards the recessive white Swakara and Dorper flocks produced 21 and 590, respectively;
- The project on the “Breeding a Strain of Vital white Swakara Sheep” was aimed at establishing a white Swakara eco-type which does not carry the lethal gene;
- Capacitated 37 Swakara farmers in Swakara sheep husbandry;
- Maintained the conservation and development of Damara, Dorper and the Gellapper sheep, and Namibia indigenous goats

4.3.1.5 Livestock Improvement Schemes

- The Ministry, through public auctions, made 364 registered breeding livestock available to the farming community of which 7 were bulls, 91 cows/heifers, 55 rams, 191 ewes and 20 goat bucks.
- Tested 333 young bulls from 6 stud breeders including stud animals from two research stations under Phase - D Performance Testing Scheme

- Received eight (8) scientific articles for publication in MAWF Scientific Journal (*Agricola*) and the Spotlight, but printing did not take place due to limited funds. All these articles will be published as part of the 2018/2019 editions. The articles to be published are:
 - **Ashipala, S. N., 2017.** The usefulness of combined drought index in Namibia, *MAWF Agricola*;
 - **Shiningavamwe, K. L., Deidre D. Januarie, Katjibena R., 2017.** Effects of incorporating sundried and coarsely ground cactus pear (*Opuntia ficus-indica*) and different nitrogen sources in the feedlot diets on the intake and digestibility by Damara wether lambs, *MAWF Agricola*;
 - **Nujoma, T., Thawana, B. S., 2017.** Production and Reproduction performance of the indigenous goats of Namibia, *MAWF Agricola*;
 - **Boys, J. M., Lubbe, L. G., 2017.** Assessing the quantity and quality forage in the dry woodland of the Kavango, *MAWF Agricola*.
 - **Boys, J. M., 2017.** Notes on some nutritional value aspect on the dominant plants of the Kalk Plateau, *MAWF Spotlight*;
 - **Lubbe, L. G., 2017.** Mapping the distribution of *Rhigozum trichotomum* and other encroaching woody species over Southern Namibia, Volume II, *MAWF Spotlight*;
 - **Shikongo, M., Lubbe L. G., 2017.** Applying the BECVOL model in the Mopane tree savanna of Namibia with the aim to determine browsing capacity, *MAWF Spotlight*;
 - **Thiyemo, P. K., 2017.** Conservation of animal genetic resources: An overview, *MAWF Spotlight*;

The following two (2) articles were published in international journals:

- **Lydia Horn, Hussein Shimelis, Fatma Sarsu, Learnmore Mwadzingeni, Mark D. Laing, 2017.** Genotype-by-environment interaction for grain yield among novel

cowpea (*Vigna unguiculata* L.) selections derived by gamma irradiation. *The Crop Journal*;

- **Lydia N. Horn, Habteab M. Ghebrehiwot, Fatma Sarsu, Hussein A. Shimelis, 2017.** Participatory varietal selection among elite cowpea genotypes in northern Namibia. *Legume Research*;

4.3.2 PLANNED ACTIVITIES FOR 2018/19

- Purify and release the 16 pearl millet varieties;
- Conduct DNA profile analyses with an independent laboratory;
- Continue with thirteen (13) crop research projects on crop improvement, soil fertility improvement, crop diversification and variety evaluation;
- Host farmers' field days at Bagani, Mannheim and Omahenene on assessment of new crop varieties to be released as a result of mutation breeding;
- Establish and conserve a breeding line for the white Swakara eco-type which does not carry the lethal gene;
- Continue with conservation of hardy and strategic livestock breeds/ecotypes on research stations.
- Publish the research project on "Evaluation of the Development of the Gellapper Sheep at Kalahari Research Station"
- Re-implement the Karakul Support Scheme.
- Continue to render services to stud breeders participating in the Performance Testing Scheme.
- Continue with Phase 3 of the bush encroachment mapping project in Northern Namibia.
- Continue surveys to test the influence of the fodder bank grazing system on the herbaceous biomass as well as the botanical composition of the Camelthorn Savanna (at Sandveld Research Station);
- Establish a tested and accepted methodology of local biomass assessment in collaboration with the University of the Free State;
- Continue to gather data on planted cultivated pasture at Okapya Livestock Development Centre.

- Assist the Namibia Agricultural Union with a National Rangeland Audit as part of the Namibia Rangeland Policy and Strategy implementation strategy.
- Training of Agricultural Scientific Officer on ultra-sound scanning in order to assess carcass characterization on a live animal
- Analyse data on reproductive performance of the Damara sheep lines (Kunene and Omatjene)
- Continue with sampling of phase 2 for DNA analysis and profiling of Namibia indigenous cattle.
- Continue with the multiplication of the Gellaper and the provision of improved animal genetic materials to the farming community through public auctions and Specialized Schemes.
- Analyze the data and compile an article for publication for the project under the Simmentaler cattle

4.4 CAPITAL PROJECTS

4.4.1 UPGRADING OF FARM INFRASTRUCTURE AND IMPROVEMENT OF IRRIGATION SYSTEMS AT TRAINING INSTITUTIONS AND RESEARCH STATIONS

MAJOR ACHIEVEMENTS FOR 2017/2018 (N\$3 153 000)

Kalahari Research Station:

- Completed the upgrading of the oxidation ponds.

Tsumis Arid Zone Agricultural Centre:

- Completed the upgrading of the oxidation ponds
- Completed the upgrading of the contactor of the standby generator

Planned activities for 2018/19 (N\$ 000)

- The construction of the new office block at the Bagani Research Station is 90% complete;

4.4.2 DEVELOPMENT OF LIVESTOCK BREEDING AND MARKETING INFRASTRUCTURE FOR COMMUNAL AREAS

Achievements for 2017/18 (N\$5 200 000)

- The construction of auctions kraal at Anker, Sesfontein Constituency in the Kunene Region is 65% complete.

Planned activities for 2018/19 (N\$)

- Complete the construction of new auction kraals at Anker in the Kunene Region;
- Construct and upgrade animal handling facilities at Alex Muranda, Okapya, Oshaambelo and Sachinga LDCs.

4.4.3 SEED PRODUCTION AT RESEARCH STATIONS

Achievements for 2017/18 (N\$11 250 000)

- Commence with production of seeds: 64.171 tons of foundation and 79 tons of certified seeds were produced.

Planned activities for 2018/19 (N\$)

- Levelling of the land, upgrade existing pump station and install 2 centre pivots on 12 and 15 ha fields at Mashare Agricultural Development Institute; and
- Continue with the production of foundation and certified seed which include procurement of production inputs and deployment of casuals for weeding, bird scaring and harvesting.

4.4.4 Extension and renovation of National Botanical Research Institute (NBRI)

Achievements for 2017/18 (N\$20 603 000)

- Completed the compilation of the Bill of Quantities

Planned activities for 2018/19 (N\$22 000 000)

- Complete documentation for the commencement of the bidding process

5. MAIN DIVISION 05 : AGRICULTURAL PRODUCTION EXTENSION SERVICES

RECURRENT BUDGET : N\$ 165 759 521

CAPITAL BUDGET : N\$ 36 523 000

5.1 OBJECTIVES

- To contribute to increased food production and household food security.
- To provide extension services in the form of information, advice and training to farmers, agro-based industries and other stakeholders.
- To promote technology development, adaptation and adoption.
- To formulate and implement regulations and policies for the agriculture sector.

5.2 MAIN FUNCTIONS

- Provide Agricultural Extension Services in the form of advice and training to farmers and stakeholders.
- Promote technology development, adaptation, and adoption and information dissemination in the agricultural sector.
- Identify and implement technological needs and requirements in the areas of agronomy, mechanization, animal husbandry, soil conservation and agricultural structures.
- Ensure conformity to regulations and policies on plant health and agro-chemicals quality and safety for the agriculture sector.
- Register agro-chemicals and farm feeds.

5.3 RECURRENT ACTIVITIES

5.3.1 ACHIEVEMENTS FOR 2017/2018

The Ministry provided extension services to the agricultural sector in the form of advisory services and training throughout the country using a participatory approach that allows rural communities to steer their own development agendas.

5.3.1.1 Dry Land Crop Production Programme

The Dry Land Crop Production Programme was implemented in the following regions: Kavango East, Kavango West, Zambezi, Oshikoto, Oshana, Ohangwena, Omusati, Kunene North and partly in Otjozondjupa and Omaheke to increase food production. Through this programme farmers were assisted with subsidized farm inputs (fertilizers and improved seeds) and agricultural services (ploughing and weeding services). A total number of 44 141 farmers have benefited from the programme during the period under review.

A total number of fifty (50) tractors were procured in addition to the existing 127 MAWF tractor fleet.

5.3.1.1.1 Fertilizers subsidy

- A total of one hundred and forty one (141) tons of different types of fertilizers [NPK 2:3:2 (37%), MAP (0.7% Zinc), Ammonium Sulphate (21%nitrogen), LAN (28%Nitrogen), UREA (46%Nitrogen), Superphosphate (18-21% Ca)] were procured by MAWF. A total of one hundred and seventy six (176) tons of fertilizers were availed under subsidy during the 2017/2018 cropping season.
- A total of 195 farmers (100 female and 95 male) benefited from the fertilizer subsidy during the 2017/2018 cropping season.

5.3.1.1.2 Seed subsidy

- During the 2017/2018 cropping season, a total of 113 tons of Mahangu seeds, 334 tons of Maize seeds and 20 tons of Cowpeas seeds were availed through the DCPD to the implementing Regions of Kavango East, Kavango West, Zambezi, Omusati, Oshikoto, Oshana, Ohangwena, Kunene North, Omaheke and Otjozondjupa.
- A total of 12 137 farmers (7207 female and 4930 male) benefited from seed subsidy during the period under review.

5.3.1.1.3 Ploughing Services

- During the 2017/18 cropping season, fifteen thousand seven hundred and seven (15 707) ha was ploughed through Government-subsidized services.

- A total of twenty eight thousand one hundred and seventy nine (28 179), (16 907 female and 11 272 male) farmers benefited from the subsidized ploughing services.
- A total of One hundred and fifty six (156) temporal jobs were created through the recruitment of contractual tractor drivers.

5.3.1.1.4 Weeding Services

- During the 2017/2018 cropping season a total number of two thousand three hundred and fifteen (2 315), (926 male & 1 389 female) farmers benefited from the weeding services.
- In total, four thousand five hundred and thirty one hectares (4 531 ha) of farmers' fields were weeded across the target regions. Through the provision of weeding services to farmers, MAWF created one thousand eight hundred and five 1 805 (male 801 and female 1004) temporal jobs for unemployed youth.

5.3.1.2 Conservation Agriculture Achievements

- Successfully mobilized external resources amounting to (N\$ 22,5mil) from GIZ, SCORE and FAO to support MAWF in strengthening and enhancing the implementation of CA.
- 10 Regional CA Forums were established in 10 Regions for planning, implementation and monitoring of CA activities;
- 515 Lead farmers were identified and capacitated in CA practices to provide farmer to farmer extension services
- In addition, a total of eight hundred and ninety three (893) farmers were trained in CA practices through workshops, demonstrations and field days.
- A total of 5000 farmers adopted at least one principle of conservation agriculture
- Two (2) training manuals on Conservation Agriculture for extension officers and farmers were developed.
- A total of two (2) tractors with tractor drawn ripper furrowers and eighty one (81) animal drawn rippers were procured for Zambezi, Kavango East and Kavango West by GIZ
- A total of 118 CA on-farm and on-station demonstrations were established and 19 field days were conducted.

5.3.1.3 Horticulture Production

- MAWF continued to support the existing and newly established gardens by providing training and technical advice to farmers and communities in the regions for enhanced food security and nutrition. A total of two thousand two hundred and fifty five (2255) farmers were trained and advised in horticulture production during the 2017/2018 cropping season, mainly in vegetable production plan, fertilizer application, planting and pest management.

5.3.1.4 South-South Cooperation between Namibia and Peoples Republic of China

- South-South Cooperation between Namibia and China phase 2 Agreement has been signed.

5.3.1.5 Migrant Pest Management

- The MAWF received a total of nine million dollars (N\$ 9 000 000.00) from the Directorate of Disaster Management from the Office of The Prime Minister (OPM) to be used in the control of fall army worm. The funds were used to procure pheromone lures, Spraying Equipment's, pesticides and protecting gears.
- The Division managed to set up 216 pheromone traps in farmers' fields in the ten (10) crop growing area (Zambezi, Kavango east, Kavango West, Ohangwena, Oshana, Oshikoto, Omusati, Kunene, Omaheke and Otjozondjupa regions) as surveillance mechanism for fall army worm.
- The 1500 liters of pesticides, 100 spraying equipment and 300 Pheromone traps were procured by MAWF and distributed to 10 crop growing areas. In addition, 300 Posters, 150 leaflets, 200 Pamphlets were distributed to all regions to create awareness and advocacy on fall army worm identification and management options.
- The Outbreak of fall army worm was reported during the month of February 2018 at Etunda Green Scheme where a total of 10 ha were affected. Pesticides were provided to the affected farmers for spraying and it is on-going.

5.3.1.6 PHYTO-SANITARY SERVICES

- The Division carried out compliance inspections on retailers, farm storage facilities and distributors. This is to ensure that the agricultural inputs are registered and also the safe handling of pesticides and fertilizer as per required standards are effected.

- A total of six thousand, six hundred and thirty nine (6639) phytosanitary certificates, import permits and in transit permits were issued on plant and plant products in line with plant quarantine act of 2008 and generated a total amount of one million and fourteen thousand nine hundred Namibian dollars (N\$1,014,900.00).
- Three hundred and fifty nine (359) new registrations were done on farm feeds, fertilizers and pesticides and one thousand six hundred and eight five (1685) renewals. An amount of six hundred and two thousand, two hundred Namibian dollars (N\$602,200.00) was generated from the registration and renewals of agricultural inputs.

5.3.1.7 BUSINESS PROCESS RE-ENGINEERING ON IMPORT AND EXPORT PERMITS

- The Division of plant Health commenced with development of business re-engineering on export, import permits and registration of agricultural inputs (pesticides, farm feeds and fertilizers)

5.3.1.8 Cereal Production

5.3.1.8.1 Mahangu Championship

- Mahangu championship award ceremony was held at Kavango West, Nkurenkuru, where farmers were recognized for their outstanding production of Mahangu. The Mahangu championship was valued at N\$40,000.00.

5.3.1.9 Livestock Production

5.3.1.9.1 Poultry distribution to small scale farmers

- MAWF supported 74 poultry farmers (35 female, 39 male) through facilitation of the payments and transportation of 1430 day old chicks (1239 hens & 191 cocks) from South Africa. In addition a total of 150 chicks were also distributed to 18 male farmers in the Rehoboth area. In total 1 580 chicks were distributed.

5.3.1.5.10 Livestock Marketing

5.3.1.5.10.1 Auction Events

- One hundred (100) livestock auctions took place countrywide, whereby fifty seven thousand four hundred and eighty one (57 481) cattle, thirty three thousand five hundred and eleven

(33 511) goats, and twenty nine thousand two hundred and eighty nine (29 289) sheep were sold.

5.3.1.6 Farmers Advice and Training

- Continuous provision of training and advice to farmers was aimed at enhancing farmer's capacities to sustainably increase livestock and crop production and productivity in order to reduce food imports and also ensure food security. In this regard, A total of 28 748 farmers were capacitated in relevant agricultural production topics including livestock husbandry, animal health, crop production as well as CA and GAP, pest management, horticulture production, land preparation, soil fertility, rangeland management, rabies vaccination, supplementary feeding, record keeping, poultry production, livestock marketing, and livestock management calendar technique among others.
- Farmers were capacitated through training, demonstrations, field days, information days, exposure visits, extension meetings, farm visits, farmers visiting ADCs.

5.3.1.7 Training of Directorate of Agriculture Production Extension and Engineering Services (DAPEES) staff in technical and managerial fields

- DAPEES staff members received in-service training courses nationally and abroad to equip themselves with the necessary skills and knowledge to be able to address the needs of farmers effectively. These training further seek to ensure a well-trained and competent team of field extension staff in the country.
- A total of two hundred and eighty five (285) extension staff received training on Conservation Agriculture Demo layout, Soil sampling, Soil analysis and interpretation, Management of fall armyworm, Sub – receiver of revenue, Data user producer training, Disaster risk management, Plant health on fall armyworm, Determining of carrying capacity, User training on spatial data and Micro irrigation.

5.3.1.8 On-farm Trials and Demonstrations

- On-farm demonstrations for both livestock and crops serve as one of the most effective extension method to train and show farmers how to perform manipulative operations and getting them to learn by doing.
- In this regard, a total of sixty two (62) on-farm demonstrations for both livestock and crops were conducted in all regions in the country with three thousand and seventy one (3071) farmers attending.
- The demonstrations focused on CA, Planting, Ripping, Fertilizer application, Ear tagging application, Deworming, Vaccination, Soil sampling and vegetable production amongst others.

5.3.1.9 Farmer's Information Days

- One hundred and thirty (130) information days were organized by extension field staff in collaboration with other stakeholders to sensitize farmers on various agricultural practices in the regions.
- Three thousand five hundred and twenty (3520) farmers attended these field days. The topics covered were on drought mitigation, rangeland monitoring, holistic herding, lick supplementation, livestock marketing, livestock diseases and control measures, valuation of crops and livestock products, Conservation Agriculture, GAP, Fall Army worm management and DCP.

5.3.1.10 Farm Visits

- The main purpose of these visits was to provide advisory services, disseminate information and monitor and assess progress on projects implementation.
- A total of five thousand one hundred and fifty eight (5 158) farmers were visited by DAPEES field staff in the regions.

- Amongst others, information and advice was provided in the following subject matters; field verification, livestock and pasture condition assessment, bush encroachment, crop production, livestock management, planting of sweet potatoes.

5.3.1.11 Farmer visits to Agricultural Development Centers

- A total of twelve thousand and eighty two (12 082) farmers including emerging and commercial farmers visited the Agricultural Development Centers (ADCs) in the country seeking information on agricultural related services.

5.3.1.12 Emerging Commercial Farmers

- A total of two hundred and ninety three (293) resettlement farmers were trained and advised on improved agricultural production practices. The type of support rendered included; poultry production, cultivated pasture, rangeland management policy and strategy and local level monitoring.

5.3.1.13 Exposure Trips

- Three (3) exposure trips were carried out where a total number of eleven (11) farmers were exposed to drip irrigation system.
- In addition one (1) exposure visit to Zimbabwe was carried out where a total number of thirty nine (39) DAPEES staff members were exposed to Conservation Agriculture activities.

5.3.1.14 Mass and Print Media

- The DAPEES disseminated information through radio, agricultural newsletters, pamphlets and leaflets in the regions. The information disseminated to farmers was on the agricultural activities such as poultry, animal health and walking tractors.
- A total of eight hundred and forty five (844) leaflets on poultry, animal health and walking tractors were developed and distributed to farmers.
- A total of one (1) newsletter was developed and distributed to farmers and various stakeholders.

5.3.1.15 Community Based Organizations

- Community Based Organizations (CBOs) play an important role in providing services at a local level and are also an integral part of Governments community service delivery system to improve the livelihood of communities. In this regard twelve (24) CBOs, farmers associations and cooperatives, farmer's leagues, farmers unions and individual farmers were supported with information on the establishment of a farmer's league and how to outsource funding from the Division of Cooperatives. The Sori-soris Farmers Association was assisted on how to develop benefit distribution plan to ensure that all conservancy members benefits equitably from conservancy resources.

5.3.2 PLANNED ACTIVITIES FOR 2018/19

- DAPEES will continue capacitating livestock producers, crop producers, Horticulture producers and stakeholders in the agricultural sector in the form of advice and training through the Farming System Research and Extension (FSRE) approach which sets responsibility of development in the hands of the farming communities.
- Continue to establish demonstration plots at the Agricultural Development Centers and other identified sites in order to carry out training.
- Continue to disseminate information and advice to emerging, resettlement, and Affirmative Action Loan Scheme farmers.
- Strengthen border control inspection capacity to ensure that all agricultural products entering and leaving the country are in conformity with the acceptable standards and are recorded.
- Procure additional tractors and implements to ensure effective and efficient service provision to farmers in crop growing areas.
- Continue with the implementation and monitoring of the Dry Land Crop Production Programme (DCPP) and Comprehensive Conservation Agriculture Programme (CCAP) aimed at increased crop production and enhanced food security.

- Continue to strengthen control measures to regulate agro-chemicals use as well as trading of pesticides and other remedies especially by street vendors, and concurrently informing the public on the danger that is associated with illegal unlabeled and unregistered pesticides.
- Continue capacitation farmers on the management of fall army worm in the crop growing regions.
- Continue to implement Fruit Fly Surveillance Programme funded by FAO through its technical cooperation programme.

5.4 CAPITAL PROJECTS

5.4.1 CONSTRUCTION OF AGRICULTURAL DEVELOPMENT CENTRES (ADCs)

5.4.1.1 ACHIEVEMENTS FOR 2017/18 (N\$ 10 620 000)

- Completed the Tubuses ADC in Kunene Region and Onamutayi ADC in Oshana Region. This brings the total number of ADCs to 146, countrywide.

5.4.1.2 PLANNED ACTIVITIES FOR 2018/19

- Construction of New ADC at Muparara in Kavango West Region

5.4.2 THE SMALL STOCK DEVELOPMENT AND DISTRIBUTION IN COMMUNAL AREAS PROJECT (SSDDCAS)

5.4.2.1 ACHIEVEMENTS FOR 2017/18 (N\$ 3,460 000)

- The Small Stock Development and Distribution in Communal Areas Project is a follow - up phase of the Small Stock and Bee Production Support Program (SSBPSP) that was implemented in the Southern Division.
- DAPEES continued to provide technical support to beneficiaries of the project. No breeding stock was procured because the whole budget was verimented to the construction of Neckertal Dam.

5.4.2.2 PLANNED ACTIVITIES FOR 2018/19

- The Ministry will procure 840 goats to be distributed to 40 identified beneficiaries in Zambezi and Kavango East regions.

5.4.3 COMPREHENSIVE CONSERVATION AGRICULTURE PROGRAMME

5.4.3.1 ACHIEVEMENTS FOR 2017/18 (N\$ 16,176 000)

- MAWF continued capacitating crop producers on the principles of CA.

5.4.3.2 PLANNED ACTIVITIES FOR 2018/19

- Continue capacitating Lead farmers and follower farmers in CA
- Procure hand, animal and tractor drawn implements which are CA oriented as well as tractors.

5.4.4 ESTABLISHMENT OF PLANT HEALTH AND BIOSECURITY LABORATORY

5.4.4.1 ACHIEVEMENTS FOR 2017/18 (N\$ 3,202,000)

- The bulk earthworks for the Plant Health and Biosecurity Laboratory is 95% complete.

5.4.4.2 PLANNED ACTIVITIES FOR 2018/19

- Construction of the project has been postponed to 2019/20 financial year after reprioritization.

5.4.5 DEVELOPMENT OF AGRICULTURAL TECHNOLOGY CENTRES (ATCs)

5.4.5.1 ACHIEVEMENTS FOR 2017/18 (N\$ 57,000,000)

- Completed the construction of the Agricultural Technology Centre at Ongwediva and procured equipment for the centre.

5.4.5.2 PLANNED ACTIVITIES FOR 2018/19

- Complete construction of the access road, interlocking, and install workshop equipment at the Ongwediva ATC.

6. MAIN DIVISION 06 : AGRICULTURAL ENGINEERING

RECURRENT BUDGET : N\$ 16 713 658

DEVELOPMENT BUDGET : N\$ 88 136 000

6.1 OBJECTIVE

- To plan, design and develop agricultural, water and forestry infrastructure and equipment for the implementation of programs and projects on irrigation, livestock, agro-industry, rain-fed crop production, horticulture, marketing, and storage of agricultural products.

6.2 MAIN FUNCTIONS

- Plan, design and develop agricultural, water and forestry infrastructure and equipment for the implementation of the Green Scheme Program.
- Supervise the construction of irrigation projects.
- Provide technical advice on planning of farm dams, pipe lines and soil and water conservation structures to farmers.
- Provide technical advice to line Ministries, NGO's and private organizations on agricultural mechanization, farm buildings, grain storage facilities and agro-industries.

6.3 RECURRENT ACTIVITIES

6.3.1 ACHIEVEMENTS FOR 2017/18 (N\$ 33 820 000)

- Assisted with the management and operation of the Green Scheme Irrigation Projects, namely; Sikondo, Shadikongoro, Uvhungu-vhungu, Ndonga-Linena, Musese, Etunda, Hardap, Tandjieskoppe, Kalimbeza, and Orange River Irrigation Project (ORIP).
- Supervised the construction of water supply infrastructure, new buildings, green houses and Low Voltage and Medium Voltage electrical supply at the Uvhungu-Vhungu Irrigation and Dairy Project.
- Supervised the construction of irrigation system, supply of bulk electricity and de-bushing at Mashare Irrigation Project.
- Supervised the fencing and upgrading of the pump station at Musese Irrigation Project.
- Supervised the development of the bulk earthworks for Fresh Produce Marketing Hub in Windhoek.

- Supervised the construction of accommodation units at the Orange River Irrigation Project (ORIP).
- Supervised the construction of the pump station at Etunda Irrigation Project - phase 7 & 8.

6.3.2 PLANNED ACTIVITIES FOR 2018/19

- Complete the construction of the MV and LV Bulk Electrical Supply at Uvhungu-vhungu Dairy Farm.
- Complete remedial work for minor civil work and electrical installations at the Uvhungu-vhungu Dairy farm.
- Complete repair and remedial work for the greenhouses at Uvhungu-vhungu Irrigation project.
- Construction of chemical store, cold storage and installation of weighbridge at Uvhungu-vhungu Green Scheme Project.
- Continue with supervision of the de-bushing and construction of the perimeter fence for Katima Farm/Liselo Irrigation Project.
- Facilitate the advertisement of Zone Green Scheme Project for development under the build, operate and transfer model in the Kavango West Region.
- Continue to upgrade irrigation and agricultural infrastructures at the Green Scheme Projects
- Identify suitable land for irrigation for the development of the Green Scheme Irrigation projects in the country.

6.4 CAPITAL PROJECTS

6.4.1. GREEN SCHEME

6.4.1.1 ACHIEVEMENTS FOR 2017/18

- Completed construction of the pump station at Etunda Irrigation Project phase 7 & 8.
- Completed construction of a pump station and irrigation systems at Musese Irrigation Project.
- Completed construction of the irrigation system, bulk electricity and de-bushing at Mashare Irrigation Project.

- Construction of employee accommodation facilities at Orange River Irrigation Project (ORIP) is 98% completed.
- Completed fencing for the pump station and construction of the irrigation systems at Musese.
- Completed upgrading of water supply infrastructure and new buildings at the Uvhungu-Vhungu Irrigation project.

6.4.1.2 PLANNED ACTIVITIES FOR 2018/19

- Continue with the de-bushing and construction of the perimeter fence for Katima Farm/Liselo Irrigation Project.
- Complete the construction of Medium Voltage (MV) and Low Voltage (LV) bulk electrical Supply at Uvhungu-vhungu Farm.
- Construction of chemical store, cold storage and installation of weighbridge at Uvhungu-vhungu Green Scheme Project.
- Complete the construction of the MV and LV Bulk Electrical Supply at Uvhungu-vhungu Dairy Farm.
- Complete remedial work for the greenhouses, i.e civil work and electrical installation at Uvhungu-vhungu Project.
- Upgrade and construction of the perimeter fence at Musese Irrigation Project.
- Facilitate feasibility studies and Environmental Impact Assessment (EIA) for Zone Irrigation Project in the Kavango West Region.
- Finalize the feasibility study and Environmental Impact Assessment (EIA) and advertisement of Zone Irrigation Project for development.
- Identify suitable land for irrigation for the development of the Green Scheme Irrigation projects in the country.
- Continue to upgrade irrigation and agricultural infrastructures at the Green Scheme projects.

6.4.2 INTEGRATED GRAIN STORAGE FACILITY

6.4.2.1 ACHIEVEMENTS FOR 2017/18

- No activities were carried in this financial year.

6.4.2.2 PLANNED ACTIVITIES FOR 2018/19

- Fencing of the site for the Integrated Grain Storage Facility at Rundu.

6.4.3 NATIONAL HORTICULTURE DEVELOPMENT INITIATIVE

6.4.3.1 ACHIEVEMENTS FOR THE YEAR 2017/18

- The construction of the bulk earthworks for the Windhoek, Wanaheda Fresh Produce Hub is 85% complete.

6.4.3.2 PLANNED ACTIVITIES FOR THE YEAR 2018/19

- Complete with the construction of the bulk earthworks for the Windhoek, Wanaheda Fresh Produce Hub.

6.4.4 KALIMBEZA RICE IRRIGATION PROJECT

6.4.4.1 ACHIEVEMENTS FOR 2017/18

- No infrastructure development activities were carried out in this financial year

6.4.4.2 PLANNED ACTIVITIES FOR 2018/19

- Routine maintenance and repair of existing infrastructure.

7. MAIN DIVISION 07

: PLANNING AND BUSINESS DEVELOPMENT

RECURRENT BUDGET

: N\$ 44 024 472

7.1 OBJECTIVES

- To provide strategic management support services to the Ministry and related Public Enterprises.
- To promote effective marketing and trade of Namibia's agricultural and processed agricultural products.
- To provide information and advice to decision makers on issues related to trade in agriculture produce and agro-industry development.
- To promote and regulate the development of cooperatives in the country.

7.2 MAIN FUNCTIONS

- Contribute to the creation of a conducive policy and legal environment for the agriculture, water, forestry sub-sectors through development and regular review of policies and legislation.
- Create conducive domestic market conditions for an increased market share of Namibia's primary and processed agricultural products.
- Secure new export markets and improve market access conditions for Namibia's primary and processed agricultural products by participating in bilateral, regional and multilateral trade negotiations.
- Create conducive conditions for value addition to Namibia's primary agricultural products
- Conduct project appraisals, monitoring and evaluation of the Ministry's programs as well as impact assessments.
- Maintain a database of agricultural production, processing and market data, and provide statistics and information on agriculture, water and forestry sectors to decision maker and other stakeholders.
- Promote international cooperation in the field of agriculture, water and forestry.

- Improve local communities' livelihoods by empowering them through the development of co-operatives and to facilitate rural development through introduction of income-generating activities, agro business development and value addition.

7.3 RECURRENT ACTIVITIES

7.3.1 ACHIEVEMENTS 2017/2018

7.3.1.1 Regulatory Framework and Policy Development for Agriculture Marketing and Trade

- The Agronomic Industry Amendment Bill is under consideration by the Legal Drafters. The promulgation of the Amendment Bill will provide for the establishment of the Agro Marketing and Trade Agency (AMTA) and Agricultural Business Development Agency (AGRIBUSDEV) as Statutory Agencies to implement the decisions taken by the Minister on advice of the Namibian Agronomic Board (NAB) on production, marketing, processing and trade of agronomic products. Under this law, the role of the NAB will solely be confined to advisory services. The Legal Advisors requested for clarification from the Ministry on some clauses in the bill. The response will be provided accordingly.
- The Meat Company of Namibia Bill is under consideration by the Legal Drafters in consultation with the technical officials of the Ministry. The Meat Company Bill clarifies the mandate and shareholding structure of Meatco. The Legal Advisors requested for direction from the Ministry on how the producers will acquire shares in the envisaged Meat Company of Namibia including the sharing of operational costs. The response will be provided accordingly.
- The amendment to the Control of the Importation and Exportation of Dairy Products and Dairy Substitutes Act, 1986 (Act 5 of 1986) is under consideration by the Legal Drafters. The Ministry organized a validation workshop that took place on 26 July 2018 and 21 August 2017. As a result, the regulations were also drafted and currently being considered by the Ministry.

7.3.1.2 Domestic Agro Industry and Agribusiness Development

- Facilitated the formulation of the Harambee Comprehensively Coordinated and Intergrated Agricultural Development Programme (HACCIADEP). HACCIADEP aims at facilitating market access for the local agricultural products in the Government institution in order to reinvigorate agricultural production and productivity in Namibia as envisaged in the Harambee Prosperity Plan.
- Provided budgetary and technical support to the Meat Board of Namibia, Namibian Agronomic Board, Karakul Board of Namibia as well as AMTA and AGRIBUSDEV.
- Continued to implement the Southern African Customs Union (SACU) rebate quota facility through issuance of rebate permits for the duty-free importation of wheat, cheese, butter, skimmed and whole milk powder.
- Facilitated the allocation of the rebate quotas under the SADC - EU Economic Partnership Agreement on pork, pig fat, butter, cheese, wheat, barley, cereal based food preparations, ice cream and mortadella bologna.
- Facilitated the launching of the "Support to the Livestock Sector in the Northern Communal Areas (NCAs) of Namibia" with the EU Delegation funded under the 11th European Development Fund to the tune of 20 Million Euro for a five year period. This programme will realise improvement of the entire value chain, starting from livestock production, processing, marketing and consumption of meat and other animal products in the NCAs, thereby creating job opportunities and income generation. By improving the quality of animals and animal products, the programme will boost opportunities for NCA farmers to sell their animals and animal products to local, national, regional and international markets. The programme will also promote better and more sustainable use of natural resources, such as water and rangeland in particular.
- Facilitated the appointment of Operators for Oshakati and Katima Mulilo abattoirs, following the withdrawal of Meatco from operating in the said abattoirs on 4 March 2016.
- Facilitated the operationalization of Eenhana and Oshakati Abattoirs. A trial slaughter process has been undertaken to test the slaughterline and equipment in the two abattoirs. The abattoirs will be commissioned as soon as the minor repairs and adjustments are done.
- Attended the industry meetings of the National Horticulture Task Team, National Mahangu Advisory Committee, National Maize and Wheat Advisory Committee, Animal

Health Consultative Forum, National Livestock Marketing Committee, Sheep Marketing Technical Committee, Pork Steering Committee as well as the Swakara Industry Forum.

- Attended the board meetings of the Karakul Board of Namibia.
- Continued to support the implementation of the Market Share Promotion (MSP) initiative for horticulture produce. The MSP aims at increasing the domestic market share for locally produced horticultural products. However, the MSP could only be maintained at 44% during 2017 due to climatic and technical factors that affected production adversely.

7.3.1.3 Agriculture Trade Negotiations

- Provided the agriculture positions for the Southern African Development Community (SADC) Meetings, Southern African Customs Union (SACU) Meetings, SADC-Eastern African Community (EAC)-Common Market for Eastern and Southern Africa (COMESA) Tripartite Trade Negotiations as well as the SACU-European Free Trade Area (EFTA) meetings. The Tripartite Trade Negotiations are on-going between 26 Member States of the three Regional Economic Communities of SADC, EAC and COMESA.
- Participated in the discussions under the Trade and Development Committee for the implementation of the Economic Partnership Agreement between the European Union and the SADC-EPA States.
- Participated in the SACU-UK-Mozambique trade negotiations following the decision by UK to withdraw from the European Union configuration.

7.3.1.4 Agricultural Trade Attaché Office (Counsellor – Agriculture), Brussels, Belgium

- The Counsellor (Agriculture) is currently stationed at the Embassy of Namibia in Brussels, on secondment from the Ministry of Agriculture, Water and Forestry. The Counsellor is primarily responsible for advancing Namibia's interests in agriculture, in particular as it relates to agricultural trade, marketing, as well as Sanitary and Phytosanitary (SPS) measures. The office responsibilities thus include analysing or writing and advising on these matters, as well as representing Namibia in meetings or discussions on the same issues.

7.3.1.5 Agricultural Planning

- Coordinated and compiled the 2017/2018 to 2021/2022 MAWF Strategic Plan which was approved by the Office of the Prime Minister;
- Coordinated and compiled the development budget for the 2018/19-2020/21 Medium Term Expenditure Framework period;
- Coordinated the development and review of the 2017/18 MAWF annual work plan;
- Compiled the NDP5 interim report and submitted to the National Planning Commission (NPC) Secretariat;
- Assessed the implementation of Rain-Fed Crop Production Programme in all the crop growing regions;

7.3.1.6 Statistics and business information

- Conducted three agro-assessments in the seven major communal crop growing regions of the country and monitored the food security, drought situation and availability of agricultural inputs at household and regional levels;
- Produced and disseminated the following publications:
 - Crop and Household Food Security Assessment Reports (two reports, i.e. preliminary in March 2017 and post-harvest in June 2017).
 - 2017 Agricultural Input and Household Food Security Report (December 2017).
 - Crop and Household Food Security Monitoring Assessment Report – March 2018
- Collected and updated Statistics on the 2017/18 Agriculture, Water and Forestry AMIS portal;
- Produced the Annual Agricultural Statistics Bulletin;
- Produced the Price Watch Bulletins;
- Coordinated the Fall Army Worm (FAW) Impact Assessment

7.3.1.7 Co-operative Development and Regulation

- Continued to administer the Co-operatives Act, 1996 (No. 23 of 1996) and implement the National Co-operative Policy that creates the legal and enabling environment for co-operative development in Namibia;

- National Co-operative Policy reviewed and approved by Cabinet;
- Provisionally registered six (6) new co-operatives;
- Co-operative Business Development Support Services;
- Reviewed business plans for five (5) co-operatives namely; Aminus Farmers' Co-operative Ltd, Amarika Farmers' Co-operative Ltd, Ohangwena Livestock Marketing Co-operative Ltd, Otjovahonge Co-operative Ltd, Oshikoto Livestock Marketing Co-operative Ltd.
- Conducted the completion of books and audit sessions in the Omaheke, Khomas, Omusati, Oshana, Oshikoto and Ohangwena Regions;
- Continued with the management of the Co-operative Loan Guarantee Fund. One (1) agricultural co-operative with a total membership of 119 members received a guaranteed loan totaling N\$2 597 200.00 from the Agribank. The guarantee amount of N\$ 2 077 760.00 was provided through the fund;
- Launched the Namibia Co-operative Policy on the 17th of August 2017.

7.3.1.8 International Co-operation

- Facilitated ongoing negotiations for a tripartite Agreement on South- South Cooperation between Namibia, China and Food and Agriculture organization of the United Nations.
- Facilitated conclusion and signing of the Memorandum of Understanding between Namibia and China on strengthening South-South Cooperation

7.4 PLANNED ACTIVITIES 2018/19

- Finalize the review of the 1997 National Drought Policy and Strategy.
- Conduct Monitoring and Evaluation of Ministerial development projects and programmes.
- Compile the Ministry's Development Budget.
- Coordinate the development and review of the 2018/19 Ministerial Annual Work Plan.
- Conduct three agro-production assessments to monitor the crop and household food security situation at the household level;
- Continue to collect both primary and secondary data on agriculture, water and forestry sectors and populate these on AMIS portal;

- Produce the Annual Statistics Bulletin;
- Produce the Price Watch Bulletin;
- Maintain the DPBD Information room;
- Facilitate implementation of HACCIADep.
- Facilitate implementation of the Livestock Programme under EDF 11.
- Develop the Framework for the Domestic Agriculture Marketing System.
- Develop the Framework for Agriculture Trade Negotiations.
- Revive the National Sanitary and Phyto-Sanitary Committee.
- Promote the implementation of the Namibia Agriculture Policy, 2015
- Promote the implementation of the Namibia Food Safety Policy, 2015.
- Promote the implementation of the Namibian Agriculture Marketing and Trade Policy and Strategy, 2011.
- Develop the Regulatory Framework for Animal and Animal Products.
- Participate in agriculture trade negotiations.
- Participate in domestic agro-industry meetings.
- Develop the Regulatory Framework for Plant and Agronomic Products.
- Promote and support investment opportunities in the downstream agro-industries.
- Provide budgetary support to the implementation of the revised Livestock Marketing Incentive Scheme for the Northern Communal Areas (NCAs).
- Develop the domestic market for the livestock and livestock products originating from the NCAs.
- Liaise with the Agricultural Counsellor's Office in Brussels on trade matters.
- Continue to promote and enhance bilateral, regional and multilateral cooperation in agriculture, water and forestry sectors.
- Finalize the Memorandum of Understanding with Senegal and Belarus in fields of Agriculture, Water and Forestry.
- Facilitate conclusion and signing of the tripartite Agreement on phase II of the South-South Cooperation between Namibia, China and the Food and Agriculture Organization of the United Nations.
- Facilitate the implementation of the second phase of the South-South Cooperation project with the Food and Agriculture Organisation and the People's Republic of China.
- Facilitate signing of Memorandum of Understanding Memorandum of Understanding with Senegal and Mali, in fields of Agriculture, Water and Forestry.

- Facilitate conclusion and signing of Memorandum of Understanding Memorandum of Understanding with Angola on the export of livestock from Namibia to Angola.
- Commence preparation for the establishment of agro-processing facilities in all regions.
- Continue to promote and enhance bilateral, regional and multilateral cooperation in agriculture, water and forestry sectors.
- Finalize the Co-operative Communication Strategy;
- Conduct monitoring and data collection visits to co-operatives;
- Facilitate and assist selected co-operatives to participate at Co-operative Trade Expos, trade fairs and industrial shows;
- Continue to promote and provide business development support to co-operatives;
- Continue to administer the Co-operatives Act, 1996 (No. 23 of 1996);
- Review co-operatives business plans;
- Continue to provide information on the formation of co-operatives;
- Provide completion of books and audit services; and
- Conduct Co-operative College courses.

8. MAIN DIVISION 08 : PRODUCT DEVELOPMENT, TRAINING AND QUALITY ASSURANCE

RECURRENT BUDGET : N\$25 834 685

8.1 OBJECTIVE

- To support the development of adequate, well-trained human resources required for the sustainable development of the agricultural, water and forestry sectors in Namibia.

8.2 MAIN FUNCTIONS

- Improve managerial, professional and technical skills and competence of staff in delivering the results in line with the strategic plan through in-service training;
- Continue with provision of training to the farming communities through short courses;
- Continues with provision of analytical services;
- Continue with product development and value addition for indigenous plants and Mahangu
- Continue with practical and skills oriented training in irrigation farming to potential small-scale irrigation farmers at the Mashare Irrigation training Centre (MITC);
- Support qualifying training to Ministerial staff and general public in fields critical to agricultural, water and forestry sectors;
- Provide career guidance in agriculture, water and forestry to secondary school learners.

8.3 RECURRENT ACTIVITIES

8.3.1 ACHIEVEMENTS FOR 2017/18

- MAWF funded 57 bursary beneficiaries in qualifying training of scarce fields I.e. Veterinary Medicine, Horticulture, Forestry, Engineering, Animal Physiology, Geo-hydrology, Environmental Health, etc. and other areas funded by MAWF as per new Job Evaluation and Grading (JEG) requirements.
- A total of thirty-one (31) trainees (16 females and 15 males) in small-scale irrigation farming at Mashare Irrigation Training Centre (MITC) and Tsumis Arid Zone Agricultural

Centre (TAZAC) successfully completed the training and are eligible for possible placement at GRN irrigation projects.

- In line with Harambee Prosperity Plan (HPP), the first intake of 15 learners (5 Females; 10 Males) for the Vocational Education and Training in agriculture at TAZAC underwent an assessment exercise under the auspices of Namibia Training Authority (NTA) while the first intake of 19 learners (10 males and 9 females) commenced a Certificate in Crop Husbandry and Horticulture NQF Level 2 at MADl in November 2017.
- Submitted the business plan of TAZAC to Namibia Qualifications Authority (NQA) for accreditation as a training provider.

Table 1: Field of Study and Status of Bursaries during 2017/18 Financial Year.

Name of field	No. of bursary holders	Level of study	Status
Accounting and Finance	1	Bachelor degree	In progress
Agriculture	1	Bachelor degree	In progress
Animal Breeding	1	PhD	In progress
Applied Mathematics and Statistics	1	Bachelor degree	In progress
Rangeland Management	4	Master	In progress
Business Administration: Management Strategy	1	Master	Completed
Food Safety and Quality Engineering	1	Master	In progress
Business Management	2	Bachelor Degree: Hons	In progress
Civil Engineering	3	Master	Thesis writing completed
Environmental Health	3	Bachelor Degree	1 completed, 2 in progress
Environmental Management	2	Master	In progress
Financial Management	1	Bachelor Degree	In progress
Forestry	3	Master	In progress
Horticulture,	1	Master	Completed

Name of field	No. of bursary holders	Level of study	Status
Human Resources Management	2	Diploma	In progress
Human Resources Management	1	Bachelor: Hons	Completed
Humanity and Social Studies	1	Bachelor degree	In progress
Industrial Biochemistry	3	Master	1 completed, 2 in progress
Integrated Water Resource Management	8	Master	One thesis writing completed, 7 in progress
Microbiology	1	Master	Completed
Natural Resources Management	1	Diploma	In progress
Office Management	2	Certificate	One completed, one in progress
Office Management	2	Diploma	In progress
Total Quality Management	1	Master	In progress
Veterinary Medicine	8	Bachelor Degree	5 completed, 3 in progress
Biotechnology	1	Master	Completed
Business Administration	1	Bachelor	In progress
Total			

The Ministry processed the following courses that were offered through bilateral agreements held with several countries.

Table 2. Courses offered through bilateral agreements

	Courses Attended	No. of staff	Gender		Amount (N\$)
			Female	Male	
1.	Market-oriented Agricultural promotion for Executive Officers in Africa	2	2	0	20,448
2.	Online course on Laboratory Quality Control System	2	2		0.00

	Courses Attended	No. of staff	Gender		Amount (N\$)
			Female	Male	
3.	Liquid-phase blocking Elisa for confirmatory diagnosis for Foot-and-Mouth Disease serotypes	2	2	0	63,297
4.	Good Animal Husbandry Practice: Inspection and Certification Services	1	1	0	0.00
5.	Seed Conservation Techniques	1	0	1	600
6.	Genebank Management, Standards and Procedures	1	1	0	600
7.	Plant Health System Analysis	1	0	1	700
8.	South-South Sanitation Learning Forum	1	1	0	3,120
9.	Geoinformatics	1	0	1	0.00
10.	Regional (AFRA) Training on Methodologies and Mechanisms for Screening of Mutants against Biotic Stresses	1	0	1	2,701
11.	Inter-regional course on the use of Sterile Insects and related techniques for the area Wide Integrated Pest Management of Native and Exotic Insect Pest	1	1	0	700
12.	Capacity Building on Information and Communication for developing Countries	2	2	0	0.00
13.	Revenue Collection	2	0	2	4,060
14.	Research and Development in Post-harvest and Processing for Food	1	1	0	4,484
15.	Environmental Impact Assessment (EIA) for Water Projects	1	1	0	0.00
16.	Business Plan Training for Member State-National Laboratory Association (MS-NLA)	1	0	1	0.00
17.	Remote Sensing with emphasis on Digital Image Processing	1	0	1	0.00
18.	Sanitary/Phytosanitary (SPS) Regulation and Risk Assessment	1	1	0	21,102

	Courses Attended	No. of staff	Gender		Amount (N\$)
			Female	Male	
19.	Seed Production and Quality Evaluation	1	1	0	1,090
20.	Advance Certificate in Information and Communication Technology in Education and Training	1	1	0	0.00

8.3.1.1 Analytical Services and Product Development (ASPD)

- Developed a quality management manual draft according to ISO 17025 for laboratory quality assurance.
- Increased efficiency by reducing the number of days to analyse samples from 30 days to 15 days.
- Increased production of culturing of mushroom spawns to 1 760
- Developed four prototypes; Mahangu and Sorghum – Eembe muffins; Cowpeas and Red beans crackers.
- Developed juice and jam prototype from monkey orange (*Strychnos spinose*)

8.3.2 Planned Activities for 2018/2019

- Continue to promote and support the development of products from indigenous plants for value addition.
- Submit the business plan to NQA for MADI for accreditation as a training provider.
- Continue with the Competency-based Education and Training (CBET) certificate training programmes in Livestock and Crop Production at TAZAC and MADI.
- Complete the quality management manual documentation in line with ISO 17025 standards for the laboratory.
- Commence with the training on the VET in agriculture of the first intake at MADI.

9. MAIN DIVISION 09 : Emergency Relief

RECURRENT BUDGET : N\$ 989 000

9.1 Achievements for 2017/18

- No emergency activities were undertaken during 2017/18.

9.2 Planned Activities for 2018/19

- Assist farmers in emergency situations that might arise due to floods, drought, and pest outbreak in 2018/19.

10. MAIN DIVISION: DIRECTORATE OF WATER RESOURCE MANAGEMENT

RECURRENT BUDGET : N\$ 41 938 000

DEVELOPMENT BUDGET : N\$ 15 771 000

10.1 OBJECTIVES

- Ensure sustainable development, management and optimal utilization of water resources.
- Ensure adequate readiness, warning, response, mitigation and prevention measures for impacts of natural disasters related to water.

10.2 MAIN FUNCTIONS

- Implement the national water policy and legislation for the management of the water resources.
- Co-ordinate, manage and monitor developments in the water sector.
- Develop regulations, procedures and practices to control the equitable allocation of water, the abstraction of water, water quality and other regulatory functions.
- Ensure equitable and reasonable access to the water from the shared perennial border rivers.
- Issue of various permits (abstraction, effluent disposal, sand mining, drilling of boreholes and building of dams) and do compliance monitoring inspections to ensure that permit conditions are adhere to.

10.3 RECURRENT ACTIVITIES

10.3.1 ACHIEVEMENTS FOR 2017/2018

10.3.1.1 PROGRAM: INTEGRATED WATER RESOURCES MANAGEMENT

10.3.1.1.1 Project: WATER RESOURCES MANAGEMENT

10.3.1.1.1.1 Sub-Project: WATER GOVERNANCE

10.3.1.1.1.1.1 Development & implementation of water policies and legislation (operational)

- The Water Resources Management Act Regulations draft was submitted to the Ministry of Justice; meetings (2) were held with the Legal Drafter in November and December for the finalization of the Regulations
- The Honorable Minister of Agriculture, Water & Forestry appointed the first Water Regulator of Namibia (WRN) on the 1st June 2017 as per Section 11 of Part 4 of the Water Act. The Water Regulator consists of five members and is to serve for five years. To-date, six meetings were held.

10.3.1.1.1.1.2 Administration of policies and legislation (operational)

- The permits were issued as follows: forty two (42) for drilling, eighteen (18) for irrigation water abstraction, four (4) for bulk water supply, eleven (11) for industrial and sea water and five (5) for effluent disposals.
- Compliance monitoring was done in the following areas: Orange River farms, Erongo Uranium mines, Stampriet and Karst groundwater control area.
- Carried out compliance monitoring investigations for Water abstraction, Sand mining, Waste-water discharge and drilling of boreholes.

10.3.1.1.1.2 Sub-Project: WATER RESOURCES ASSESSMENT, PLANNING AND ANALYSIS

10.3.1.1.1.2.1. Water Resources Data Collection and Analysis

(i) Water resource (groundwater, surface water, water quality) monitoring network is functional

- Civil works for four (4) additional hydrological monitoring stations were done in the Cuvelai-Etосha at Engombe, Onyele, Omafo & Akati and installation of 3 CELOs and one (1) Mini-Orpheus was done at these stations respectively. The dilapidated infrastructure was rehabilitated at Shanalumono monitoring station. A gauge plate was also installed at Amanzi Trail in the Orange River for flood monitoring. A total of 86 monitoring stations were maintained countrywide.
- Two (2) Master Monitoring Stations, namely Ai-Ais and Seeheim were successfully surveyed in order to correct/upgrade the rating equations as most of the stations rating are theoretical. This activity is very important as the volume of flow calculated is done through a rating formulae or equation.
- Telemetry equipment for groundwater monitoring were installed at 13 sites in the Ohangwena and Karst groundwater control areas to improve water resources data and information collection.
- Emergency water supply for the central areas of Namibia (CAN) was achieved through the prompt assessment, evaluation and permitting of the available groundwater resource in the Karst area and central coastal aquifers Omdel and Kuiseb aquifer.
- Seventeen (17) technical reports were sent to Policy and Water Law Administration Division to issue Wastewater and Effluent Disposal Permits.
- Pollution Control and Compliance Monitoring was carried out at Oshikoto, Omusati, Oshana, Hardap, Karas, Ohangwena, Otjozondjupa, Erongo, and Khomas.
- Water Quality monitoring was conducted in Okavango River.
- Provided information on sustainable water use management and utilization to the relevant stakeholders.
- Seventy percent (70%) of station data was edited and archived up to the latest hydrological season; approximately 55 data requests were received from a range of institutions such as Engineering Consulting companies, Schools, Students, UNAM and

NUST for the following purposes: feasibility studies, EIA for upgrading of roads & railways, research projects, fish projects and hydraulic designs

(ii) *Water resources data collection and database systems (WAQIS, HYDSTRA, and GROWAS) operational*

- Six of the seven hydrology service areas were visited for data collection
- National State of the Water Resources report was drafted
- **HYDSTRA:** database administration and software license upgrade was completed

10.3.1.1.1.2.2. National water planning and coordination

(i) Implementation of National Integrated Water Resources Management (IWRM):

- Implementation of National Integrated Water Resources Management (IWRM) Plan continued
- Annual Wetlands and Water awareness raising campaign carried out through the commemoration of World Wetlands Day and World Water Day.
- National Water Saving Campaign to promote water use efficiency in public institutions (OMAS) was launched, water marshals trained.
- Continued to provide technical, administrative and financial support to the already established water management institutions (basin management committees). To date ten (10) basin management committees have been established for the following basins and sub-basins; Kuiseb, Iishana, Omaruru, Okavango, Orange-Fish, Olushandja, Tsumeb, Niipele, Upper-Swakop and Zambezi.

(ii) Flood & Drought Management Plans:

- Made a requested for NAMWATER to release water from Hardap dam via Fish River for Neckartal Dam. In this regard, a total of 4 releases were done for an amount of 7.882Mm³ on 31 July, 11 August, 11 September and 28 September respectively.

- Repaired the Sendlingsdrift and the Blouputs gauging monitoring stations to ensure real time receiving of data for prompt response/early warning.
- Ndonga Linena Investigation: Conducted investigations on regarding the unusual presence of water on Omatako-Omuramba stream.

(iii) Basin Management Plans

- Conducted a stakeholders' consultations towards the development of the Upper-Swakop Basin Management plan
1. **International Water Planning and Co-ordination (previously: Promotion of Namibia's interest in shared river basins and international organizations)**
 - Coordinated the implementation of transboundary basin management projects at national levels in Orange-Senqu, Okavango, Zambezi, Cuvelai and Kunene Basins. This included projects on national stakeholders' engagements and consultations, climate resilience, water demand management, flood/drought early warning, data sharing, etc.
 - Continued to honor international cooperation agreements and various meetings were organized and attended; i.e. Okavango Permanent Water Commission (OKACOM), Orange-SenquRiver Commission (ORASECOM), Zambezi Watercourse Commission (ZAMCOM), Cuvelai- Commission (CUVECOM), Permanent Joint Technical Committee on Kunene River Basin (PJTC), Permanent Water Commission on Lower Orange River Basin (PWC), African Minister Council on Water (AMCOW)], UNESCO-International Hydrology programme (IHP), WaterNet/Water Research Fund for Southern Africa/Global Water Partnership.
 - Finalized the framework for a Water Allocation Strategy for the Okavango-Cubango
 - Made annual payment contributions to the operations of the river basin commissions to which Namibia is a party

- **PWC** held its regular meetings to discuss progress on the Noordoewer/Vioolsdrift Dam Feasibility Study. The project was anticipated to complete in September 2017. Extension request has been received to allow completion of the Environmental Impact Assessment. The MoU on the principles of cooperation along the Lower Orange River is expected to be signed by Ministers of Water in the next financial year, to pave the way for joint development and water sharing.
- Permanent Joint Technical Committee (PJTC) the Namibia Task Force Calueque (TFC) and Committee on Bilateral Agreements (CBA) drafted the Interim Joint Operating Rules for the Calueque Scheme operations. After discussion with Namibia PJTC they will be forwarded to Angola counterparts.
- **WaterNet/Water Research Fund for Southern Africa (WARFSA)/Global Water Partnership Southern Africa (GWP-SA):** The Ministry successfully hosted the 18th WaterNet/WARFSA/GWP-SA Symposium from 25 to 27 October 2017. A total of 320 participants attended the symposium from 25 different countries around the world.
- **International Hydrological Program (IHP):** Continues to participate in UNESCO IHP initiatives and work on modalities in setting up the National IHP committee in collaboration with National Commission for UNESCO (NATCOM). Namibia continue to serve on the IHP intergovernmental council as Chairperson of the UNESCO IHP Finance Committee.
- The Southern Africa Science Service Centre for Climate Change and Adaptive Land-Use (SASSCAL) task on Hydrology flood risk mapping in Zambezi and Cuvelai-Etосha Basins are ongoing with the process of acquiring real time monitoring instrumentation, research as part of Master's thesis and field trips in collaboration with UNAM

2. Flood & Drought early warning/forecasting system

- About 67 daily flood and drought bulletins were compiled and disseminated to stakeholders.
- Actively participated in the climate change issues through platforms such as National Climate Change Committee (NCCC), Technical Working Group of the Migration,

Environment and Climate Change (MECC), the Sustainable Land-Use Committee and FAO-funded involvement in the Nationally Determined Contributions Technical Working Group on Agriculture (which includes: crops, livestock, forestry, fisheries, aquaculture, and cross-cutting areas such as water).

10.4 CAPITAL PROJECTS

10.4.1 PROJECT 1: UPGRADING & EQUIPPING OF WATER ANALYSIS LABORATORY

10.4.1.1 ACHIEVEMENTS 2017/18

- Cleaned up the Laboratory and disposed off expired consumables
- Completed inventory exercise
- Renovation of the Water Analysis Laboratory ongoing
- Upgraded, installed and calibrated equipment
- Developed the concept for risk based drinking water quality management

10.4.1.2 PLANNED ACTIVITIES 2018/19 (N\$367 000)

- Integration of lab analysis data in WAQIS
- Operationalizing of the laboratory
- Training of the laboratory staff and sample takers
- Acquire Additional Equipment
- Operationalize the Laboratory
- Running routine analyses, reducing necessity to send out samples
- Setup of cost-effective scheme for necessary regular external maintenance and validation
- Validation of Analyses
- Capacitate and select staff for routine lab analysis work by continuous regular training program
- Sample taking training program and standardization of sampling
- Starting with routine risk based drinking water monitoring as per preface of New Water Act
- Preparation of laboratory for certification according to SABS/SANS and ISO 17025

10.4.2 PROJECT 2: INVESTIGATIONS AND FEASIBILITY STUDIES AND INITIATION OF THE DEVELOPMENT OF WATER INFRASTRUCTURE

10.4.2.1 Noordoewer/Vioolsdrift Dam Feasibility Study (Capital 2.1)

10.4.2.1.1 ACHIEVEMENTS 2017/18

- Co-ordinated the feasibility study for Noordoewer/Vioolsdrift Dam (the following tasks have been completed: Water Resources Planning Model, Water Quality Modeling, Environmental Screening, Water Requirements Assessments, Sedimentation Assessment, Dam Design and Optimization, drilling for geotechnical assessment).

10.4.2.1.2 PLANNED ACTIVITIES 2018/19

- Continue coordinating and overseeing the work of the consultant on the feasibility study for Noordoewer/Vioolsdrift Dam

10.4.2.2 Quantification of Water Resources of Namibia (Capital 2.2)

10.4.2.2.1 ACHIEVEMENTS 2017/18

- Assessed data for re-modeling and re-quantifying of the Karst and Stampriet Aquifer's
- Undertook in-house modelling of the Karst Area A & B2 and Stampriet High Production Area's

10.4.2.2.2 PLANNED ACTIVITIES 2018/19 (N\$2 364 000)

- Continue reviewing and calibrating the Karst Area A & B2 model
- Replicate the pilot modelling in other strategic groundwater resources

10.4.2.3 Recharge & Quantification of the Stampriet Artesian Aquifer (Capital 2.3)

10.4.2.3.1 ACHIEVEMENTS 2017/18

- Conducted regional training on groundwater modelling, national training on legal, institutional and gender related issues

- Strengthened cooperation amongst riparian states sharing the aquifer through the establishment of a Multi-Country Cooperation Mechanism (MCCM) housed within the ORASECOM
- Developed the STAS (Stampriet Transboundary Aquifer System)

10.4.2.3.2 PLANNED ACTIVITIES 2018/19

- Review groundwater model on the layer thickness, calibration of the model and simulation of various scenarios

10.4.2.4 Geohydrological Investigation in the Cuvelai-Etосha Basin (Capital 2.4)

10.4.2.4.1 ACHIEVEMENTS 2017/18

- Three production boreholes were drilled in the Ohangwena II Aquifer to improve water supply to Eenhana in the Cuvelai-Etосha basin
- Signed the Project Implementation Agreement between MAWF and BGR
- Finalized drafting of a financing agreement for the de-fluoridization plant

10.4.2.4.2 PLANNED ACTIVITIES 2018/19

- Tendering and procurement of the de-fluoridization plant
- Upgrading of the groundwater monitoring network

10.4.2.5 Review and Upgrading of the National Water Resources Monitoring Systems (Capital 2.6)

10.4.2.5.1 ACHIEVEMENTS 2017/18

10.4.2.5.1.1 Namibia UNESCO Water Sector Support: (NUWSSP)

- **Joint Management Committee (JMC) Meetings:** Three meeting (3) took place on 26 June 2017, 22 August 2017 and 5 October 2017 respectively.
- **Capacity building component:** The Ministry contributed to the development of two (2) Masters Programs: A MSc Programme at NUST in Environmental Engineering and a

MSc Programme in Water Resources Management at UNAM. These programs are aimed at developing human resources capacity in the water sector. To date 11 students have been enrolled at NUST and 25 students at UNAM (7 of these are MAWF staff).

- MAWF identified four (4) short courses that are critical and cross-cutting between the Directorate of Water Resources Management (DWRM) and Directorate of Water Supply and Sanitation Co-ordination (DWSSC).
- Integrated Drought and Flood Management Plan (IDFMP): A key stakeholders' consultation meeting towards the development of the IDFMP for the Cuvelai-Etосha Basin took place on Thursday, 24 August 2017 at UNAM's José Eduardo dos Santos Campus at Ongwediva
- Civil works was done in Cuvelai for 3 stations for the hydrology monitoring network, however installation pending.

10.4.2.5.2 PLANNED ACTIVITIES 2018/19

10.4.2.5.2.1 Namibia UNESCO Water Sector Support

- Joint Management Committee Meeting (JMC): Secretariat and Project Co-ordinator for meetings/project; finalizing ToR for Scientific Advisory Council (SAC); M&E of project
- Capacity Building Component (UNAM, NUST & UNESCO): Follow-up on Master's Program and implement development of short courses and on-going Professional training
- Development of Integrated Drought and Flood Management Plan for CEB: ToR for expert, commission development of plan, stakeholder consultations
- Construction, Expansion, Maintenance and Upgrading of Water Resources Monitoring Network (Surface Water)
- Carry out Civil works at Noordoewer,
- installation of Chobe Water villa station
- Installations of 3 stations in the Cuvelai

10.4.2.5.3 PLANNED ACTIVITIES FOR 2018/19

10.4.2.5.3.1 PROJECT 1: WATER RESOURCES MANAGEMENT (MONITORING)

10.4.2.5.3.1.1 Subprojects 1: Water resource monitoring network

i) Water Quality, pollution control and data collection

- Carry out wetlands and water resources awareness raising
- Conduct water resources quality monitoring country-wide
- Carry out water quality, pollution control and compliance monitoring country-wide

ii) Hydrological network and data collection

- Survey river gauging stations and dams
- Expand hydrological monitoring network (Cuvelai, Omaruru, South, North-east).
- Continue with maintenance and servicing of monitoring stations
- Continue with the administration and maintenance of databases, editing and analysis of data; dissemination of data upon request.
- Build capacity in fieldwork, editing & analysis of data, basic surveying and updating/reviewing of rating formulas of key master stations.

iii) Geohydrological network and data collection

- Water quantity and quality monitoring
- Carry out compliance monitoring

iv) Water use licensing and compliance

- Carry out compliance monitoring

10.4.2.5.3.1.2 Subprojects 2: Water resources investigations and feasibility studies

- i) Basin studies and status reports
 - Compile basin status reports
- ii) Water Resources information assessment and data management
 - (a) Flood and Drought Early Warning Systems
 - Capacity building through UN-SPIDER (United Nations Disaster Platform for Space-based Technologies for Disaster Management and Emergency Response)
 - Maintain SADC-MESA early warning system.
 - Keep improving the Namibia Flood Dashboard with NASA.
 - Strengthen research and investigations by extended field work especially through the SASSCAL project's flood risk monitoring and assessments
 - Continue with the generation and dissemination of daily flood and hydrological drought bulletins
 - Continue to participate in Climate and Disaster Risk Initiatives
 - (b) Flood management Plans and Investigations
 - Flood risk mapping
 - Flood Studies, Investigation and Report: Follow-up on implementation of recommendations
 - (c) HYDSTRA database and Administration
 - Administration of and maintenance of databases,
 - Editing and analysis of data;
 - Dissemination of data upon request.
 - Develop capacity
- iii) Water analysis
 - Expand the water quality network
 - Develop capacity

10.4.2.5.3.1.3 Subprojects 3: Basin management plans developed

i) Stakeholder engagement and water awareness

- Continue with the implementation of the National Integrated Water Resources Management Plan activities.
- Continued support (both technical and financial) towards the operations of the water basin management committees, mainly the implementation of their water resources management plans.
- Upscale the National Water Saving Campaign to other parts of the country
- The ten (10) basin offices will continue to organize and support stakeholders' engagement and water awareness platforms such as radio/TV shows, meetings, workshops, talks, targeted campaigns, etc.

ii) Information sharing

- Coordinate activities/information between MAWF, relevant stakeholders and general public.

iii) Basin Plan Development

- Commissioning processes and procedures towards the development of Upper-Swakop basin management plan

iv) Basin Plans monitoring and evaluation

- Develop and execute the M&E plan to measure the progressive implementation of basin management plans country-wide

10.4.2.5.3.1.4 Subprojects 4: Transboundary water resources management (previously International Water Planning and Coordination

- i) Namibia inputs and interest in shared rivers plans
- Contribute to transboundary water management through (OKACOM, ORASECOM PJTC, CUVECOM, PWC and ZAMCOM by reviewing and providing inputs into reports/documents, contribute to data and information sharing, contribute to the development and implementation of Strategic Action Plans, contribute to capacity building by hosting international conference and symposia.
- PJTC, negotiations on the Interim Operating Rules for Calueque Scheme will continue including power for the pump operations.

- ii) Implementation of shared rivers basin plan activities
 - Review and assess project progress/activities
 - Implement National Action Plan/Strategic Action Plan
- iii) River Basin Commissions and international cooperation
 - Host and attend meetings
 - Review and assess project progress/activities
 - Establishing the Secretariat for the CUVECOM,
- iv) Compliance to agreement provisions on shared rivers by other riparian countries
 - Ensure equitable access to shared watercourses
 - Notification on planned development
- v) International Co-operating Partners
 - **International Hydrological Program (IHP):** Continue to participate in UNESCO IHP initiatives and establish a Namibian National IHP committee

10.5 SASSCAL Project

- Procurement of real time water level, weather station, sedimentation & water quality sensors, rainfall data collection equipment and flow monitoring instrumentation to be used for flood monitoring and forecasting analysis in the Cuvelai and Zambezi floodplains
- Flood monitoring assessments for the Cuvelai and Zambezi Basins
- Student to finalize thesis
- Procurement of GPS, plotter, scanner, adaptors and extension cables for the lab GIS Lab
- Acquire satellite images, process images, develop maps

10.5.1 PROJECT2: REGULATORY FRAMEWORK (DEVELOPMENT & REVIEW) MONITORING & COMPLIANCE

10.5.1.1 Subproject 1: Water Resources Management Act and administration

- i) Facilitate finalization of the Water Act Regulations
 - Gazetting of regulations

- ii) Facilitate the commencement of the Water Act
 - Commencement of the Act
 - Review National Water Policy White paper
 - Issue permits as per the new WRMA Regulations

- iii) Carry out stakeholder engagement
 - Promotion and popularization of Water Act Regulations

10.5.1.2 Subproject 2: Negotiation Strategy Development

- Review existing agreements
- Facilitate strategy development
- Draft strategies

11. MAIN DIVISION 11 : RURAL WATER SUPPLY & SANITATION CO-ORDINATION

RECURRENT BUDGET : N\$ 156 868 352

CAPITAL BUDGET : N\$ 777 116 000

11.1 OBJECTIVE

- To improve the quality of life of communities living in rural communal areas.
- To coordinate regionally and nationally all water supply and sanitation services

11.2 MAIN FUNCTIONS

- Provide access to potable rural water supply.
- Improve rural sanitation services.
- Coordinate urban and rural water supply and sanitation services.

11.3 RECURRENT BUDGET

11.3.1 ACHIEVEMENTS FOR 2017/2018 (N\$ 10 350 000)

- Stakeholder consultative workshop on Supply Subsidy Policy and Community Based Management (CBM) Strategy was held in all clustered regions.
- Stakeholder consultations to identify the criteria for the poor households in accordance with the Water Supply Subsidy Policy
- Maintenance and rehabilitation of more than 5 000 communal water points countrywide.
- Convened National and Regional WATSAN meetings.
- Community awareness-raising on sanitation health and hygiene education

11.3.2 PLANNED ACTIVITIES FOR 2018/2019

- Review and update the 5 year National Sanitation Strategy.
- Launching and implementation of the Open Defecation Free Namibia Communication Strategy Public awareness in terms of health and hygiene education through animations shall continue to be broadcast on the National broadcaster and other media.

- Capacity building for the Management and Staff of the Directorate of Water Supply and Sanitation Coordination will continue.
- Maintaining existing water supply infrastructure countrywide.
- Coordinate and convene National and Regional WATSAN meetings.
- Training of Water Point Committees.
- Conduct awareness-raising on sanitation health and hygiene education in 13 regions and at National Level.
- Continue strengthening planning and coordination activities at National and at Regional Levels.
- Providing technical support to other programs, projects and Ministries on water supply and sanitation aspects to fulfil the advisory aspects of the national coordinating role of DWSSC mandated by Cabinet.

11.4 CAPITAL PROJECTS

11.4.1 RURAL WATER SUPPLY COVERAGE

The project aims at providing clean, piped water to rural communities living in areas where the groundwater quality is not suitable for human consumption. Pipe water schemes are playing a major role in contributing to the achievement of the Millennium Development Goals (MDGs) and the reduction of poverty.

11.4.1.1 ACHIEVEMENTS FOR 2017/2018 (N\$ 26 915 000)

- Completion of the construction of Katima Mulilo – Kongola Phase 2 Water Supply Scheme in Zambezi Region
- Completion of construction of the Itapa - Okeeholongo Water Supply Scheme in Omusati Region
- Construction of extension of Ondangwa – Omuntele Pipeline in Oshikoto Region is 94% complete.

11.4.1.2 PLANNED ACTIVITIES FOR 2018/2019 (N\$ 30 273 000)

- Continuation with the construction of Ondangwa – Omuntele Pipeline extension in Oshikoto Region
- Construction of the water reservoir for Katima Mulilo – Ngoma Phase 2, Zambezi Region
- Construction of the King Kauluma – Omutsegwonime Water Supply Scheme Phase 2 in Oshikoto Region
- Construction of the Ruacana South Water Supply Scheme Phase 1 in Kunene Region
- Construction of the Katima Mulilo – Kongola Water Supply Pipeline Phase 3 in Zambezi Region
- Commence with the construction of water supply scheme (Shamvhura to Shamangorwa) for the displaced communities of Kavango East.

11.4.2 IMPLEMENTATION OF COMMUNITY BASED MANAGEMENT

The overall objective of the project is to ensure functioning of all water points in the country. The project will ensure that water points are upgraded to acceptable working standard so that they could be handed over for management and operation and maintenance to communities. The project is implemented with the full involvement of the communities who are expected to manage, operate and carry out minor maintenance on their infrastructure. A number of water infrastructures have been rehabilitated with some new points being newly developed.

11.4.2.1 ACHIEVEMENTS FOR 2017/2018 (N\$ 0)

- Nine (9) Boreholes were Installed
- Twenty (20) Short pipelines were constructed

11.4.2.2 PLANNED ACTIVITIES FOR 2018/2019 (N\$10 215 000)

- Water points installations and rehabilitation
- Drilling, installation and rehabilitation of boreholes.

11.4.3 IMPLEMENTATION OF DECENTRALISATION, CONSTITUENCY OFFICE CONSTRUCTION

This project enhances the process of decentralizing the rural water supply functions to constituency level and creates a framework for efficient service provision even closer to the rural people. Although the project name covers decentralization, the focus is more on the construction of rural water supply and sanitation area/constituencies offices and staff accommodation.

11.4.3.1 ACHIEVEMENTS FOR 2017/2018

- Nothing was done due to zero budgetary allocation.

11.4.3.2 PLANNED ACTIVITIES FOR 2018/2019

- No allocation has been made for this Financial Year.

11.4.4 CONSTRUCTION OF DAMS, TRADITIONAL WELLS AND PANS FOR LIVESTOCK DRINKING

This project aims to build traditional wells, pans and dams for livestock drinking. These new dams and pans infrastructure ensure that water is impounded during rainy seasons for continuous use during both the rainy and dry seasons.

11.4.4.1 ACHIEVEMENTS FOR 2017/2018

- No allocation was made for the 2017/18 period, hence no activities were undertaken

11.4.4.2 PLANNED ACTIVITIES FOR 2018/2019

- No allocation has been made for the 2018/19 period, hence no activities are planned

11.4.5 CONSTRUCTION OF LARGE DAMS, DESALINATION AND PROVISION OF WATER TO LARGE SETTLEMENTS

The project aims to ensure that adequate surface water is captured to ensure water security and promote reliable water supply for human, industrial and agricultural use. Furthermore, the project aims to augment existing water resources with desalinated sea water or brackish ground water.

11.4.5.1 ACHIEVEMENTS FOR 2017/2018 (N\$ 582 375 569)

Engineering and construction at the Neckartal Dam Project

The following has been achieved at the three main sections of the project, namely: the Main dam, Quarry, Abstraction Works and Pipeline.

MAIN DAM

- Reinforcement concrete in Inlet Outlet structure
- RCC Works for entire length of Dam completed from El. 778.40m till El. 781.7m
- Hydro mechanical installation in Intake Tower in progress.
- Rip rap placement
- Drilling & flushing of curtain grouting on primary & secondary holes were done.
- CVC works for Turbine room
- Drilling of drainage holes
- Concrete Repairs are done continuously at the Apron sills, Intake tower and in the cone holes of the Upstream side of the Main Dam and in at entrance of the upper gallery
- Installation of Air & Water Pipes is ongoing in the lower gallery
- Electrical works in the Lower Gallery

PIPELINE AND BALANCING DAM

- Installation of bypass line is completed
- Installation of the pipe on CH2840
- Installation of DN300 outlet pipe valve and flanges

ABSTRACTION WORKS: SEDIMENT TRAP, WEIR & PUMP STATION

- CVC casting works for Electrical room
- CVC Casting for Sand Trap walls, gravel Trap walls, Trash Screen walls & Jet Pump
- CVC Works for Ogee Spillway Crest at Abstraction Weir
- Rip Rap works in progress
- Brick works at Pump station

LABORATORY

- Test on RCC Placement, fresh and hard CVC pours
- Test on backfill in Valve Chambers along the pipeline.
- Test on materials in Pump Station and Deflector wall.
- Equipment Calibration.

INSTALLATION / PLANTS:

- CVC & RCC Batching Plant in operation.
- CVC batching plant operational
- RCC batching plant operational
- Ice plant operational
- All electrical/water distribution is operational
- All tower cranes operational
- Removal and disassembly of RCC conveyor system
- Removal of the crushing plant

11.4.5.2 PLANNED ACTIVITIES FOR 2018/2019 (N\$ 403 628 000)

- Completion of all works on the Construction of the Neckartal Dam Construction Project

11.4.6 RURAL AND URBAN SANITATION INFRASTRUCTURE DEVELOPMENT

The objective of this project is to develop sanitation infrastructure in rural areas and coordinate the implementation of sanitation policy in rural and urban areas.

11.4.6.1 ACHIEVEMENTS FOR 2017/2018

- There was no allocation for 2017/18 period hence no activities were undertaken.

11.4.6.2 PLANNED ACTIVITIES FOR 2018/2019

- No allocation has been made for 2018/19. No activities have been planned.

11.4.7 DEVELOPMENT PARTNER FUNDED PROJECTS

11.4.7. 1 EUROPEAN COMMISSION

- **NAWASA**

The EU Support to Namibian Water Supply and Sanitation Sector Programme (NAWASA) has been funded under the 10th European Development Fund. A Financing Agreement between the Government of the Republic of Namibia and the European Union was signed in 2011.

Total funding disbursed for the programme is € 7,840,000.00. This has been subdivided into three institutions of which € 5,284,178 is for activities under the Ministry of Agriculture, Water and Forestry.

Some of the activities planned by the Ministry of Agriculture, Water and Forestry under the Programme are;

- Water and Sanitation Survey
- Support towards advocating of Community Led Total Sanitation (CLTS)
- Development of the Water Supply and Sanitation Information System (WSSIS)
- Review of the 5-Year Sanitation Strategy
- Procurement of emergency material for water infrastructure maintenance
- Drilling and installation of water supply boreholes
- Support to bulk water supply infrastructure, including water treatment facilities

12. MAIN DIVISION 12 : FORESTRY

RECURRENT BUDGET : N\$ 82 327 632

CAPITAL BUDGET : N\$ 68 763 000

12.1 OBJECTIVE

- To practice and promote the sustainable and participatory management of forest resources and other woody vegetation, and to enhance socio-economic development and environmental stability.

12.2 MAIN FUNCTIONS

- Develop, maintain and improve forest resources including their contribution to global carbon cycles.
- Manage, maintain and enhance the productive and protective functions of forest and other wooded lands.
- Conserve and maintain the biological diversity of forests and other wooded lands.
- Maintain and enhance the socio-economic benefits of forests and other wooded lands.
- Utilize undesirable bushes for sustainable land-use management in order to restore the desirable rangeland and wildlife habitats.
- Promote bush value chain
- Improve and develop the wood industry.
- Develop and promote tree planting for a sustainable environment and economy.
- Conduct forest and botanical research and provide information to responsible decision-making in the forestry sector.

12.3 RECURRENT ACTIVITIES

12.3.1. ACHIEVEMENTS FOR 2017/18

12.3.1.1 FOREST POLICY, PLANNING, LEGISLATION AND INFORMATION

The intervention was to develop or review Forestry Policy and Legislation and communicate key issues to the public, spearhead co-ordination in forestry development and enforce the laws.

Forest / Veld Fires Policy development was initiated and the first draft was produced with the objectives of managing Forest / Veld Fires in Namibia.

- The Forest resource use have been regulated through issuing various forest permits to the public; namely harvesting, transporting, marketing, exporting, importing, Transit permits, totalling 26 548 permits.
- A large quantity of illegally harvested forest produce were confiscated and impounded at Forestry Offices in Kavango West, Kavango East, Zambezi, Kunene, Otjozondjupa, Omaheka, Omusati, Oshikoto, Ohangwena and Oshana regions waiting for auctioning.
- Treasury authorization was granted to donate 20 000 seedlings valued N\$160 000 to various stakeholders for planting purposes during the 2017-2018.
- Strategic planning for organizational management and operations is being implemented at both headquarters and regional level, and guidelines and other technical support are given to the field-based officials.
- Extension information were produced, printed and distributed: Arbor Day posters and pamphlets, Posters on fire prevention and how to fight fire and posters on how to plant tree and care of trees.
- Radio talks on fire prevention conducted on the National Broadcasting Corporation in 9 local languages.
- Information on the importance of forests disseminated to the public during the annual events such as Trade Fairs, Arbor Day, World Environment Day and World Food Day.
- The implementation of Forestry key processes re-engineered (BPR), the Permit issuing process was rolled out in the regions that reduced the time of issuing permits.
- The forestry permit system online application was demonstrated to DoF staff by the online developer / consultant
-

12.3.1.2 COMMUNITY-BASED FOREST MANAGEMENT

The intervention focuses on activities carried out in collaboration with rural based people and organisations on communal lands focusing on devolution of, and sustainable management and utilisation of forest resources in community forests to enable communities to generate income from those areas.

- Infrastructure development is progressing well in the following community forests: Salambala, Masida, Lubuta, Kwandu, Sikanjambuka and Sachona offices in Zambezi region, Likwaterera office and Ncumucara craftshop in Kavango
- East and Katope office in Kavango West, Nyae Nyae store and Ondjou office in Otjozondupa region This construction is co-financed by the Federal Republic of Germany through KFW.
- The dossier of the following Community forests: Otjituuo, N#ajagna, Oshikutshiithilonde, Omundaungilo, Izimwe, Sibulamunda, Ngoma, Muyako, Ondjou and Ehi-rovipuka, Eiseb, Omuramba uambinda and Otjombinde covering about 1,889 665 ha were forwarded to the Chief Legal Adviser (Attorney General Office) and 8 of the community forests dossier received back which are now ready to be submitted to the Minister for gazettment.
- Harvesting contracts were signed between FMBs of Okongo, M'kata, Katope, Kwandu, Cuma and Lubuta Community Forests in Ohangwena, Otjozodjupa, Kavango West and Zambezi regions respectively and harvesters to harvest timber trees (Kiaat Tree) and fire wood.
- Staff members facilitated the establishment of Brick making project at Otshiku-shiithilonde and Uukolonkadhi Community Forests. In total N\$1 297 051 was collected in all community forests participating in income generation activities such as timber concession, camping sites, issuing permits and bee honey production.

12.3.1.3 FOREST PROTECTION AND CONSERVATION

The intervention covers the priority functions of Directorate of Forestry to ensure that the Environmental and socio-economic values of forests are adequately protected and conserved both inside and outside of communal forest areas.

- A total of 86 fire breaks of 1 518 km have been identified in most of fire prone areas to be constructed in order to control the spreading of forest fires. Five communities were trained on fire management. Unfortunately, fire breaks construction and maintenance could not be carried out due to implementation of the new Public Procurement Act.
- A total of 37 apiaries sites established and 170 litres of bee honey was harvested from existing apiaries.

12.3.1.4 TREE PLANTING AND ORCHARD DEVELOPMENT

The intervention covers seedlings production and support tree planting and other on-farm forestry activities on private farms; on land allocated to individual households; in community forests; and woodlots and orchards on communal lands with the aim to increase forest cover and income-generating activities.

- Technical support provided to 150 farmers on tree planting and orchards development
- 511 ha of orchard maintained through watering, pruning, applying manure and fertilizers, weeding and apply chemical for insects and disease while 2 330 seedlings planted in 11 orchards. The lower hectares planted is due to drought and dry spell experienced in the country.
- A total of 72 529 seedlings were produced, while 7 483 seedlings donated and 48 702 sold to the public. A total of 16 tons of fruits (mangoes, lemons, natjies and guavas) were harvested and sold to the public
- Staff attended training on nursery management at Development Aid People to People (DAPP) in Omusati region.

12.3.1.5. WOOD INDUSTRY AND DEBUSHING

- De-bushing programme is currently being implemented in removing unwanted bushes from Government farms with the aim to increase agricultural land productivity and accessibility to the Ministry's infrastructure and contribute to employment creation opportunities especially for the youth. A Tender on de-bushing was advertised but could not be awarded because the season is not favourable for de-bushing operations.

The intervention aims at creating an enabling environment whereby wood based entrepreneurs can access wood resources for commercial purposes.

- The Ministry facilitated the harvesting of wood for the production of charcoal, poles, droppers, timber, roots, arts and craft and firewood through issuing of permits.
- The tender for leasing the wood marketing facilities was awarded but the bidder turned off the offer.
- The construction of offices were completed namely Mukwe and Onankali. While staff accommodations were also completed at Hamoye, Epukiro and Karasburg.

12.3.1.6 FOREST AND BOTANICAL RESEARCH

The intervention aims to develop and implement forest research projects and provide technical/scientific services to the forestry sector.

- As part of the revision of the plant family Acanthaceae (plant family with the centre of endemism in Namibia) the following scientific articles are in first draft form and co-authored by staff from the National Herbarium of Namibia: The genus *Barleria* in Namibia and Angola, The genus *Rhinacanthus* in Namibia and Angola, The family Poaceae (grasses) of Namibia. NBRI has completed one articles that was submitted to journal for review and waiting for the feedback.
- Upgrading of wild fire service monitoring system. The service is primarily developed to receive real time data on wild fire for the purpose of monitoring and inform forestry regional staffs, farmers and other relevant stakeholder to take necessary actions to manage and control wild fire. The service is based on the Monitoring for Environment and Security in Africa (MESA) Wildfire Station, which features the AFIS Fire Terminal application developed by CSIR-Meraka institute in South Africa. European Union donated satellite dish computers through MESA to upgrade the current wild fire monitoring station
- Collected field data on vegetation cover at Caprivi and Hamoye State Forests to produce vegetation maps and change.
- Produced fire outline priority maps for Omaheke and Kunene regions.
- Continued to manage all field based research trials and other infrastructures

12.3.1.7. HUMAN RESOURCE DEVELOPMENT

The intervention focus on capacity build and support to the implementation of forestry programme and projects.

- Human resources management and services delivery has significant improved due to the appointment of staff at various levels namely: two Labourers, one workhand, one cleaner Mururani gate, twenty-five (25) new staff members were recruited and assumed duties: four Forestry Technicians for Aminuis, Epembe, Tsumeb and Okatjali, three Forest Rangers for Epembe, Onamishu and Tsumeb; seven labourers, and eight (8)

Administrative officers for Karasburg, Onayena, Okongo, Omafo, Ongenga, Ongha, Engombe and Okatjali forestry offices; one Senior Forester for Onankali, one workhand for Ongwediva and one operator driver for Karasburg.

- Six (6) staff members who were additional to the structure were transferred to the Directorate of Rural Water Supply and Sanitation Cordination.
- Ten Administrative Officers vacant positions for Otjituo, Otavi, Okakarara, Tsumkwe, Mukwe, Ndiyona, Mpungu, Siya, Sibbinda and Kongola offices were advertised and candidates were interviewed but appointment letters have not yet released. .
- Eight staff members furthering their studies in Diploma in Natural Resources Management. BSc Honours degrees and MSc.
- One staff member completed his BSc studies.
- The following staff members were promoted: Mr Fillemon Kayofa to Deputy Director Forest Management, Mrs Cynthia Sinvula to Senior Forestry Technician, Ms Monika Amutenya and Ms Helmi Auala to Senior Forester, Mr Gervasius Uunona and Mr M. Ndara translated from Forestry Technician to Forester
- Administrative Officers and their supervisors were trained on revenue handling.
- Two staff members attended fire training in South Africa, prescribed fire burning. Several meetings were held in the NEFR when the Deputy Director for Forest Management paid courtesy calls to forestry offices in the region.
- Staff members attended the following training / workshops/ conferences: 6th National Fire Management Conference in Botswana, Bee Health Project Dissemination and Close Out Meeting in Kenya, Fire information management in Botswana, Adaptation to Climate change through social forestry in Kenya and Digital Image Processing in India.

12.3.2. PLANNED ACTIVITIES FOR 2018/19

12.3.2.1 FOREST POLICY, PLANNING, LEGISLATION AND INFORMATION

The mission of the Directorate of Forestry is to practice and promote the sustainable and participatory management of forest resources and other woody vegetation, to enhance socio-economic development and environmental stability.

In order to achieve on the above, the following activities will be undertaken during the 2018/2019 Financial Year.

1. Development of Policy and Legislation

- Finalization the development and approval of the National Forest /Veld Fire Policy

2. Community Forestry

- Complete the construction of community forests facilities at Ncumucara community forest, Katope community forest, Sikajabuka community forest, Nyae-nyae community forest and Ondjou community forest and equipped with appropriate equipment and tools for wood work.
- All the community forests with carpentry machine, and firewood machine will be supported to produce more and quality products and marketing thereof.
- Monitoring the brick making projects at Oshikushithilonde and Uukolonkadhi Community Forests.
- Facilitating the gazetement of the 13 community Forests with completed dossiers
- Conduct 10 community forest inventories in ten community forests and develop management plans.

3. Tree Planting and orchard development

- Continue to maintain 511ha of existing orchard and woodlots across the country.
- Produce 230 000 seedlings from government nurseries for sale, planting and donations for extension services
- Increase quality plant production for planting and sale to the public. Establishment of new fruit trees areas (orchards) of 100 ha both in green scheme and outside green scheme. The orchards in the green scheme will be fitted with irrigation system to reduce workload.
- In collaboration with Namibia University of Science and Technology to establish Moringa tree research plot at Siya (5ha) forestry station.
- Carry out inventory in orchards and Eucalyptus plantations and produce orchard maps.
- Organize International Forest Day and National Arbor Day celebrations

4. Forest Protection and Conservation

- Intensify awareness/information sharing/campaign on forest protection against fire and illegal forest operations by patrolling the forests and construct fire cut-lines to reduce the speed of forest fires.

- Construct and maintain 7 000 km of fire cut lines in fire prone areas.

5. De-bushing programme

- Monitoring of Animal Feed production being implemented at Okondjatu in Okakarara Constituency Otjozondjupa region and Dordabis in Windhoek Rural Constituency, Khomas region.
- Advertising Debushing activities and facilitate direct de-bushing in government farms.
- To supply biomass, transfer technology and capacity building to enhance bush value chain for the use of energy and animal feed.

6. Forest and Botanical Research

- Continue monitoring of wild fires and generate maps and report, upgrading software and hardware.
- Continue maintaining research trials infrastructure
- To establish two field based research trials
- Establish research trials on value addition of non-wood forest products (Ximenia, marula and Aloe Zebrine)
- Assess and monitor land use and land cover change at national level
- Publish research findings on: 1. management of the mopane shrubland, 2. The use of earth observation on vegetation monitoring in all three state forests, 3. Taxonomic revision of Genera Barleria, Rhinacantus, Thunbergia within the Acanthaceae family
- Revision of Flora of Namibia with emphasis on the following families Acanthaceae (herbs), Poaceae (Grasses), Asphodelaceae (Aloes)

7. Infrastructure development

- Upgrade and equip tissue culture laboratory at Okahandja
- Install irrigation system in green scheme orchards and four nurseries
- Establishing new nurseries at Okangwati, Epembe, Aranos, Aminuis and Epukiro.
- Complete the construction of 9 community facilities supported by KfW and NAFOLA development partner (Ondjou, Katope; Ncumcara, Sachona, Lubuta; Sikanjabuka, Likwaterera, Kwando, Otjiu-west and Oshaampula Community Forests)
- To acquire a plot at Omaruru Town for the construction of the Ministry office.

12.4 CAPITAL PROJECTS

12.4.1 INTEGRATED FOREST RESOURCES MANAGEMENT AND DEBUSHING PROJECT

12.4.1.1 ACHIEVEMENTS FOR 2017/2018 (N\$ 13 823 805)

- Continue to maintain all field based research trials to ensure that crucial information is collected to assist with the management of forest resources.
- Fire bulletins were produced daily and monthly fire maps.
- Implemented and curate (NBRI) botanical garden, herbarium, National Plant Genetic Resources Centre (NPGRC), Economic Botany and threatened plants.
- Local communities trained on forest fire management
- Forest fire awareness campaign will continue to make the people aware of fire management and clearing of fire cut-lines, extension messages will be developed in local languages and broadcasted through Namibia Broadcasting Cooperation during fire season.
- The Ministry continues to support farmers who want to farm with bees so as to diversify income-generating activities.
- Produce 72 529 seedlings from Government nursery for sale, donations, extension services, woodlots and orchard development.
- Plant 50 ha of orchard and woodlots with 50 000 seedlings.
- Maintain and management of 490 ha of woodlots and orchards.
- Supported community on sustainable management and utilisation of forest resources through community forestry concept in the following regions: Otjozondjupa, Omaheke, Kunene, Omusati, Oshana, Oshikoto, Ohangwena, Kavango East and Kavango West and Zambezi region.
- Firewood business, timber harvesting business, beekeeping, Guinea fowls farming, wood carving and carpentry have been supported.
- The construction of Onankali office and Karasburg, staff accommodation completed.

12.4.1.2 PLANNED ACTIVITIES FOR 2018/2019

The Ministry will continue with the implementation of different projects and programs.

- Tree Nurseries management – install irrigation system in four (4) nurseries.
- Establish eleven (9) tree nurseries at new forestry offices at Kongola, Ndiyona, Mpungu, Karibib, Epukiro, Ben-Hur, Aminius, Okatyali, Okangwati, Khorixas and Epembe.
- Raise 230 000 seedlings from government nursery for sale, donations for extension services,
- Plant 100 ha of woodlots and orchard development.
 - Seed collection and processing
 - Maintain and management of 511 ha of woodlots and orchards
 - Carry out awareness campaigns on permits issuing, tree planting, fire management activities in various communities.
 - Provide technical assistance to the Green scheme on the establishment of orchards
 - Establish link with the AMTAs fresh hub for marketing of fruits from orchards
 - Equip tissue culture laboratory and train staff and start operations of seedling production through tissue culture
 - Produce maps for woodlots and orchards.
 - Construct and maintain 7 000 km of fire breaks
 - De-bush 3,000 ha in commercial and communal areas.
 - Conduct ten (10) forest inventory in community forests
 - Declare thirteen (13) community forests
 - Apply for a plot at Omaruru Town for the construction of Ministry
 - Supervise and monitor the construction of 9 community facilities financially supported by KFW development partner and two community facilities financed by NAFOLA
 - Renovate and upgrade the current Eenhana Forestry office into a storeroom, Outapi bachelor flats and a house.
 - Maintain research plots in all regions and collect research data as per set protocols.



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